FCC Test Report

Report No.:	RF170427C12-4
FCC ID:	UZ7TC25AJ
Test Model:	TC25AJ
Received Date:	Apr. 27, 2017
Test Date:	May 16 ~ Aug. 16, 2017
Issued Date:	Sep. 14, 2017
Applicant:	Zebra Technologies Corporation
Address:	1 Zebra Plaza Holtsville New York United States 11742
Manufacturer:	Zebra Technologies Corporation
Address:	1 Zebra Plaza Holtsville New York United States 11742
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF170427C12-4	Original release.	Sep. 14, 2017

1 Certificate of Conformity

Product:	Touch Computer
Brand:	ZEBRA
Test Model:	TC25AJ
Sample Status:	Engineering sample
Applicant:	Zebra Technologies Corporation
Test Date:	May 16 ~ Aug. 16, 2017
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Sep. 14, 2017

Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Sep. 14, 2017

Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -11.81dB at 0.32204MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.63 dB
	200MHz ~1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Touch Computer
Brand	ZEBRA
Test Model	TC25AJ
Sample Status	Engineering sample
MFD	11JUL17
HW Version	DV
SW Version	90-06-05-N-00-E1
Power Supply Rating	5Vdc from adapter or host equipment 12 or 24Vdc from Vehicle Cigarette Adaptor 5Vdc from power pack 3.85Vdc from battery
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260~5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500~5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180~5240MHz: 62.517mW 5260~5320MHz: 69.984mW 5500~5720MHz: 69.663mW 5745~5825MHz: 70.307mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter, Gun Handle, Arm Mount, Holster , Vehicle Cigarette Adaptor, Power pack (Refer to note 4 for more details)
Cable Supplied	1.5m shielded USB Type C to Type A cable without core (Refer to note 4 for more details)

Note:
1. The EUT has 2 types for sale.

Brand	Model	Difference
ZEBRA	TC25AJ	Scanner SE4710 with camera
		Scanner SE2100 with camera

2. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT20)	1TX
802.11ac (VHT40)	1TX
802.11ac (VHT80)	1TX

* The modulation and bandwidth are similar for 802.11n mode for HT20/HT40 and 802.11ac mode for VHT20/VHT40. After pre-testing, 802.11ac (VHT20/VHT40) power is lower than 802.11n (HT20/HT40), therefore 802.11n (HT20/HT40) is the worst case to representative mode in test report. (Final test mode refer section 3.2.1)

3. The EUT consumes power from the following adapter, Vehicle Cigarette Adaptor, battery and power pack.

Adapter	
Brand	ZEBRA
Model	SAWA-65-20005A
Input Power	100-240Vac, 0.5A, 50-60Hz
Output Power	5Vdc, 2.5A

Vehicle Cigarette Adaptor	
Brand	ZEBRA
Model	SAWA-68-25005A
Input Power	12-24V(3.5A)
Output Power	5V(2.5A)

Battery	
Brand	ZEBRA
Model	BT-000334
Rate capacity	3000mAh
Min capacity	2800mAh
Rate Voltage	3.85Vdc

Power Pack	
Brand	ZEBRA
Model	BT-000343
Rate capacity	2900mAh
Min capacity	2800mAh
Rate Voltage	3.85Vdc

4. Accessory devices of EUT are list as below.

Specification of Accessory		
AC Adapter	Brand Name	ZEBRA
	Model Name	SAWA-65-20005A
USB Type C cable	Brand Name	ZEBRA
	P/N Number	CBL-MPM-USB1-01
Gun Handle	Brand Name	ZEBRA
	P/N Number	TRG-TC2X-SNP1-01
Arm Mount	Brand Name	ZEBRA
	P/N Number	SG-TC2X-ARMNT-01
Holster	Brand Name	ZEBRA
	P/N Number	SG-TC2X-HLSTR1-01
Vehicle Cigarette Adaptor	Brand Name	ZEBRA
	Model Name	SAWA-68-25005A
Power pack	Brand Name	ZEBRA
	Model Name	BT-000343

5. The following antennas were provided to the EUT.

Type	Connector	Gain (dBi)		
		WLAN 2.4GHz	WLAN 5GHz	BT
PIFA	NA	2.25	4.20	2.24

6. 2.4GHz & 5GHz cannot transmit at the same time.

3.2 Description of Test Modes

5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

5500~5720MHz:

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz
138	5690 MHz		

5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Scanner SE4710, EUT+USB cable+adapter
B	-	√	√	-	Scanner SE4710, EUT+USB cable+adapter+power pack
C	-	√	√	-	Scanner SE4710, EUT+USB cable+adapter+Gun Handle
D	-	√	√	-	Scanner SE4710, EUT+USB cable+Vehicle Cigarette Adaptor
E	-	√	√	-	Scanner SE2100, EUT+USB cable+adapter

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement
RE<1G: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission
APCM: Antenna Port Conducted Measurement

NOTE:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Y-plane
2. "-": Means no effect.

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C, D, E	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C, D, E	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Test Condition:

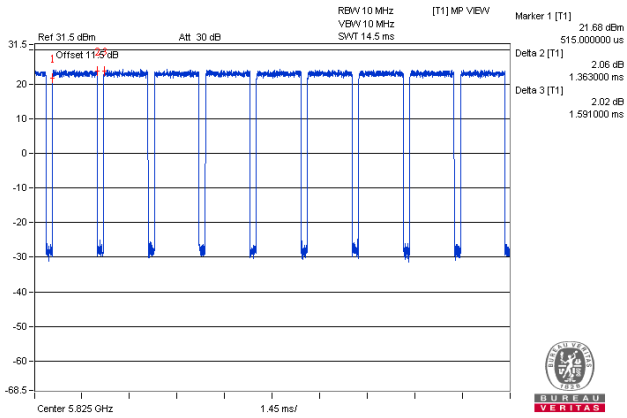
Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Matthew Yang, Luis Lee, Chris Lin
RE<1G	25deg. C, 70%RH	120Vac, 60Hz	Luis Lee
PLC	25deg. C, 75%RH	120Vac, 60Hz	Luis Lee
APCM	25deg. C, 60%RH	120Vac, 60Hz	Frank Liu

3.3 Duty Cycle of Test Signal

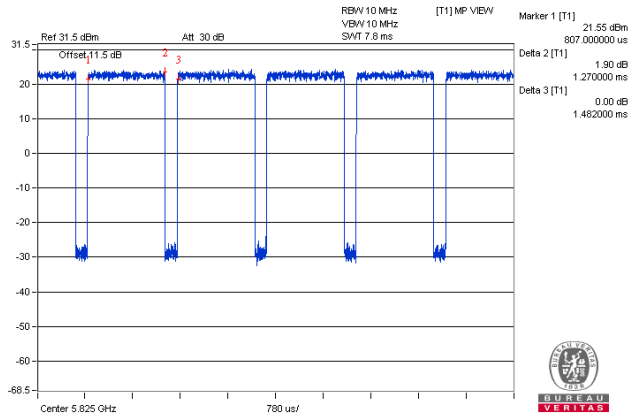
Duty cycle of test signal is > 98%, duty factor is not required.
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle = 1.363/1.591 = 0.857, Duty factor = 10 * log(1/0.857) = 0.67
802.11n (HT20): Duty cycle = 1.27/1.482 = 0.857, Duty factor = 10 * log(1/0.857) = 0.67
802.11n (HT40): Duty cycle = 0.631/0.843 = 0.749, Duty factor = 10 * log(1/0.749) = 1.26
802.11ac (VHT80): Duty cycle = 0.249/0.448 = 0.556, Duty factor = 10 * log(1/0.556) = 2.55

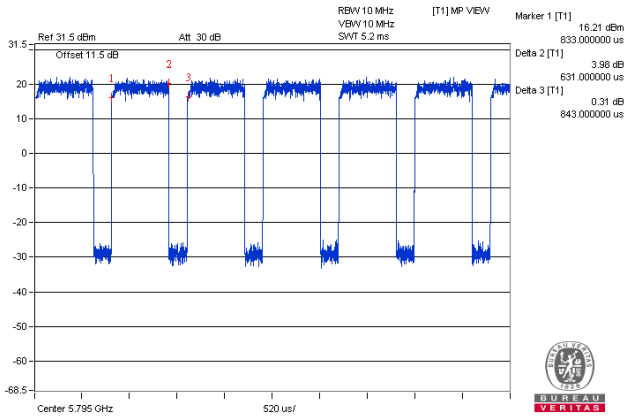
802.11a



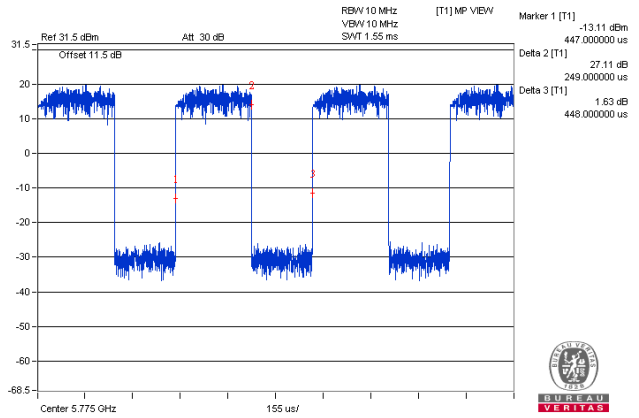
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



3.4 Conducted Output Power

		802.11a Real Average Power							
		6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Band 1	Ch36	17.91	-	-	-	-	-	-	-
	Ch40	17.95	17.72	17.74	17.75	17.90	17.86	17.94	17.80
	Ch48	17.92	-	-	-	-	-	-	-
Band 2	Ch52	18.34	-	-	-	-	-	-	-
	Ch60	18.45	18.32	18.43	18.38	18.43	18.39	18.36	18.22
	Ch64	17.41	-	-	-	-	-	-	-
Band 3	Ch100	18.26	-	-	-	-	-	-	-
	Ch116	18.31	18.21	18.24	18.15	18.21	18.18	18.18	18.19
	Ch140	17.30	-	-	-	-	-	-	-
	Ch144	17.38	-	-	-	-	-	-	-
Band 4	Ch149	17.32	-	-	-	-	-	-	-
	Ch157	17.45	17.21	17.42	17.23	17.30	17.25	17.21	17.25
	Ch165	17.26	-	-	-	-	-	-	-

		802.11n(HT20) Real Average Power									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Band 1	Ch36	17.93	-	-	-	-	-	-	-	-	-
	Ch40	17.96	17.77	17.80	17.77	17.75	17.79	17.83	17.84	17.90	17.71
	Ch48	17.90	-	-	-	-	-	-	-	-	-
Band 2	Ch52	18.30	-	-	-	-	-	-	-	-	-
	Ch60	18.37	18.22	18.25	18.25	18.17	18.25	18.14	18.22	18.35	18.28
	Ch64	18.27	-	-	-	-	-	-	-	-	-
Band 3	Ch100	18.28	-	-	-	-	-	-	-	-	-
	Ch116	18.43	18.26	18.21	18.31	18.26	18.41	18.41	18.35	18.40	18.19
	Ch140	16.68	-	-	-	-	-	-	-	-	-
	Ch144	18.35	-	-	-	-	-	-	-	-	-
Band 4	Ch149	17.31	-	-	-	-	-	-	-	-	-
	Ch157	17.33	-	-	-	-	-	-	-	-	-
	Ch165	17.39	17.19	17.23	17.19	17.21	17.38	17.32	17.34	17.15	17.36

		802.11ac (VHT20) Real Average Power									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Band 1	Ch36	17.91	17.73	17.87	17.82	17.83	17.74	17.78	17.84	17.79	17.80
	Ch40	17.86	-	-	-	-	-	-	-	-	-
	Ch48	17.71	-	-	-	-	-	-	-	-	-
Band 2	Ch52	18.28	-	-	-	-	-	-	-	-	-
	Ch60	18.36	18.27	18.28	18.21	18.24	18.35	18.26	18.16	18.31	18.23
	Ch64	18.20	-	-	-	-	-	-	-	-	-
Band 3	Ch100	18.18	-	-	-	-	-	-	-	-	-
	Ch116	18.19	-	-	-	-	-	-	-	-	-
	Ch140	16.67	-	-	-	-	-	-	-	-	-
	Ch144	18.31	18.15	18.19	18.12	18.22	18.15	18.19	18.17	18.08	18.09
Band 4	Ch149	17.17	-	-	-	-	-	-	-	-	-
	Ch157	17.17	-	-	-	-	-	-	-	-	-
	Ch165	17.20	17.16	17.06	17.08	17.08	17.09	17.03	17.06	17.08	17.17

		802.11n(HT40) Real Average Power									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Band 1	Ch38	17.47	-	-	-	-	-	-	-	-	-
	Ch46	17.89	17.71	17.74	17.85	17.84	17.66	17.65	17.80	17.81	17.79
Band 2	Ch54	18.41	18.33	18.38	18.36	18.40	18.37	18.17	18.20	18.18	18.17
	Ch62	15.48	-	-	-	-	-	-	-	-	-
Band 3	Ch102	14.99	-	-	-	-	-	-	-	-	-
	Ch110	18.37	18.20	18.29	18.35	18.27	18.15	18.15	18.22	18.23	18.35
	Ch134	18.27	-	-	-	-	-	-	-	-	-
	Ch142	17.66	-	-	-	-	-	-	-	-	-
Band 4	Ch151	18.22	-	-	-	-	-	-	-	-	-
	Ch159	18.39	18.20	18.21	18.20	18.29	18.17	18.27	18.26	18.34	18.19

		802.11ac (VHT40) Real Average Power									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Band 1	Ch38	17.24	-	-	-	-	-	-	-	-	-
	Ch46	17.87	17.73	17.83	17.75	17.84	17.69	17.69	17.64	17.75	17.83
Band 2	Ch54	18.35	18.17	18.14	18.24	18.10	18.20	18.18	18.10	18.29	18.32
	Ch62	15.24	-	-	-	-	-	-	-	-	-
Band 3	Ch102	14.97	-	-	-	-	-	-	-	-	-
	Ch110	18.21	18.13	18.12	17.98	18.14	18.19	18.06	18.14	18.11	18.13
	Ch134	18.05	-	-	-	-	-	-	-	-	-
	Ch142	17.44	-	-	-	-	-	-	-	-	-
Band 4	Ch151	17.99	-	-	-	-	-	-	-	-	-
	Ch159	18.16	18.07	18.02	18.10	18.03	17.99	17.95	18.04	18.05	17.99

		802.11ac (VHT80) Real Average Power									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Band 1	Ch42	16.88	16.81	16.82	16.80	16.66	16.66	16.77	16.82	16.67	16.63
Band 2	Ch58	16.98	16.79	16.96	16.79	16.74	16.84	16.88	16.93	16.74	16.91
Band 3	Ch106	16.78	-	-	-	-	-	-	-	-	-
	Ch122	18.39	-	-	-	-	-	-	-	-	-
	Ch138	18.47	18.26	18.24	18.23	18.24	18.25	18.45	18.26	18.23	18.24
Band 4	Ch155	18.47	18.23	18.36	18.35	18.31	18.32	18.40	18.34	18.37	18.36

3.5 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

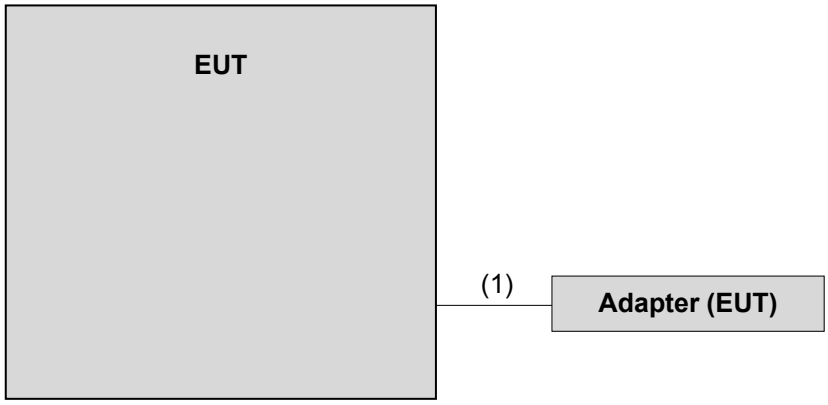
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	DC power supply	Keysight	U8002A	MY56330015	NA	-

Note: All power cords of the above support units are non-shielded (1.8m).

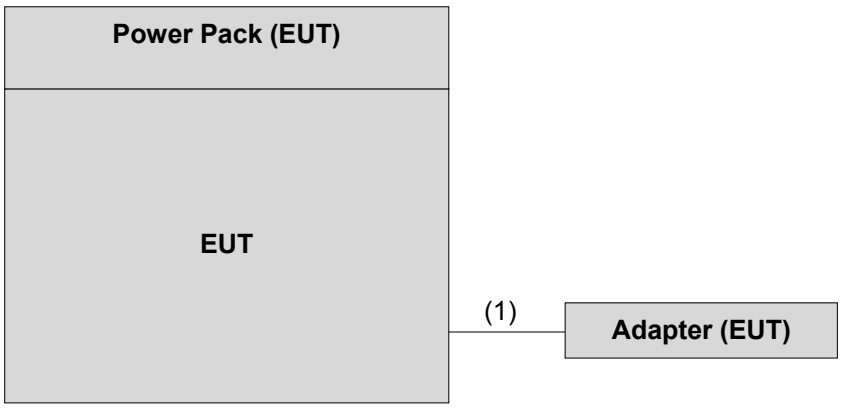
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Type C	1	1.5	Y	1	Accessory of EUT
2.	DC cable	1	1.0	N	0	-

3.5.1 Configuration of System under Test

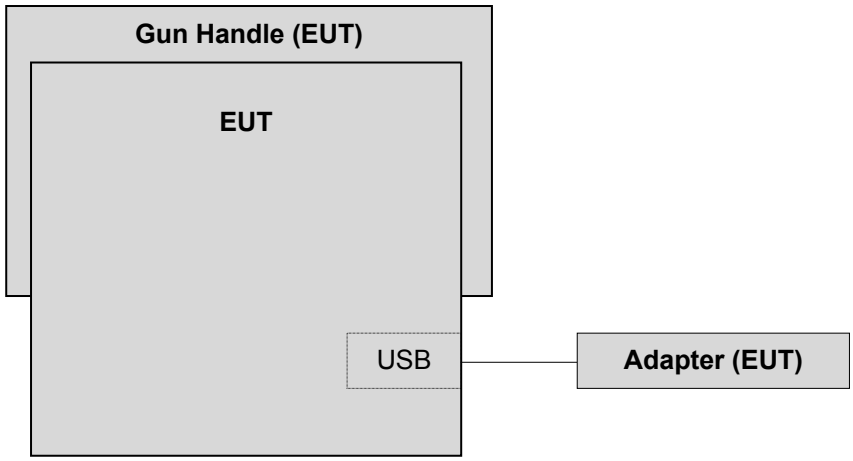
Test Mode A, E



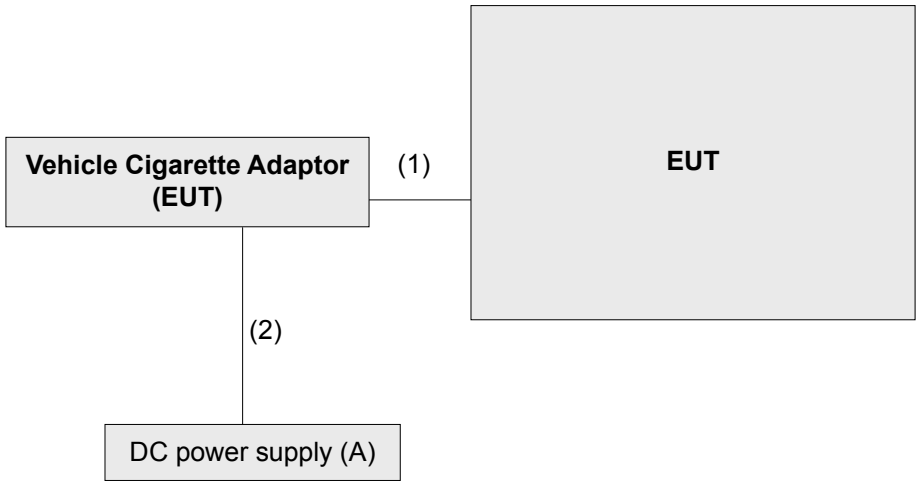
Test Mode B



Test Mode C



Test Mode D



3.6 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedure New Rules v01r04
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10:2013

All test items have been performed and recorded as per the above standards.

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v01r04</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2(dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK: -27 (dBm/MHz) *1
PK: 10 (dBm/MHz) *2
PK: 15.6 (dBm/MHz) *3
PK: 27 (dBm/MHz) *4</td><td>PK: 68.2(dBµV/m) *1
PK: 105.2 (dBµV/m) *2
PK: 110.8(dBµV/m) *3
PK: 122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ µV/m, where P is the eirp (Watts).

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Mar. 27, 2017	Mar. 26, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Loop Antenna ETS-LINDGREN	3127-1880	00099260	Sep. 26, 2015	Sep. 27, 2017
Loop Antenna TESEQ	HLA 6121	45745	May 19, 2017	May 18, 2018
Preamplifier Agilent	8449B	3008A01638	Feb. 22, 2017	Feb. 21, 2018
Preamplifier Agilent	8447D	2944A10638	Aug. 09, 2016	Aug. 08, 2017
			Aug. 08, 2017	Aug. 07, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-02 (248780+MY13377)	Aug. 09, 2016	Aug. 08, 2017
			Aug. 08, 2017	Aug. 07, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/ 4)	Aug. 09, 2016	Aug. 08, 2017
			Aug. 08, 2017	Aug. 07, 2018
RF signal cable Woken	8D-FB	Cable-CH9-01	Aug. 09, 2016	Aug. 08, 2017
			Aug. 01, 2017	Jul. 31, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
High Speed Peak Power Meter	ML2495A	0842014	Apr. 24, 2017	Apr. 23, 2018
Power Sensor	MA2411B	0738404	Apr. 24, 2017	Apr. 23, 2018

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
5. The IC Site Registration No. is IC7450F-4.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Both X and Y axes of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.

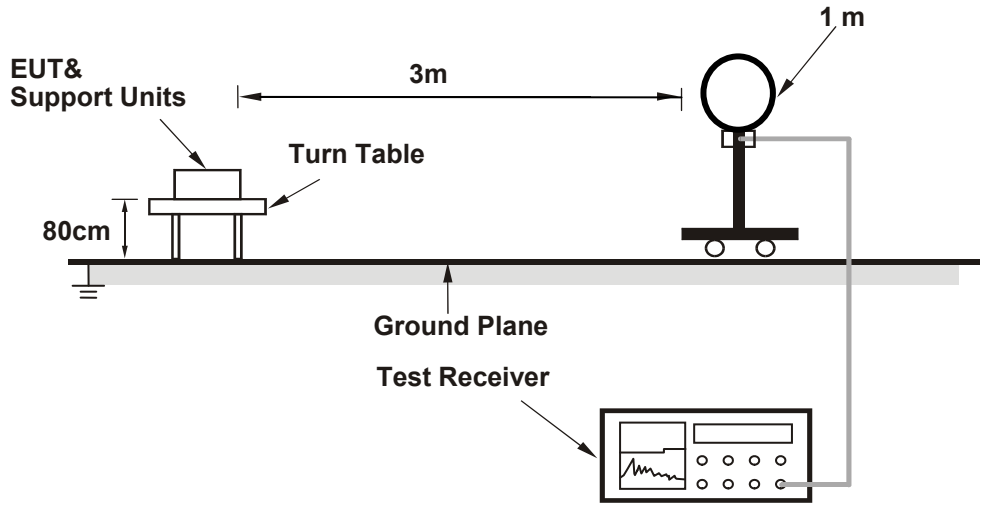
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

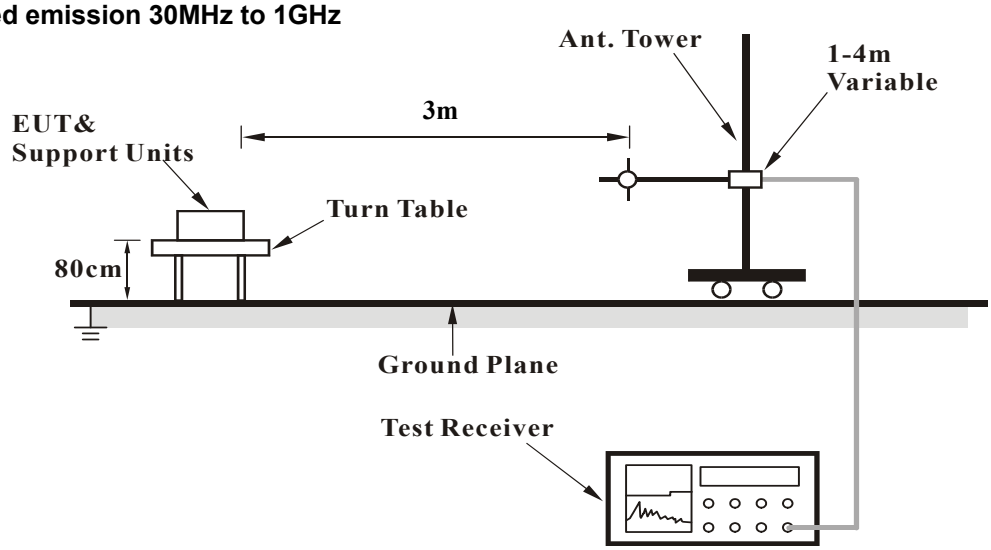
No deviation.

4.1.5 Test Set Up

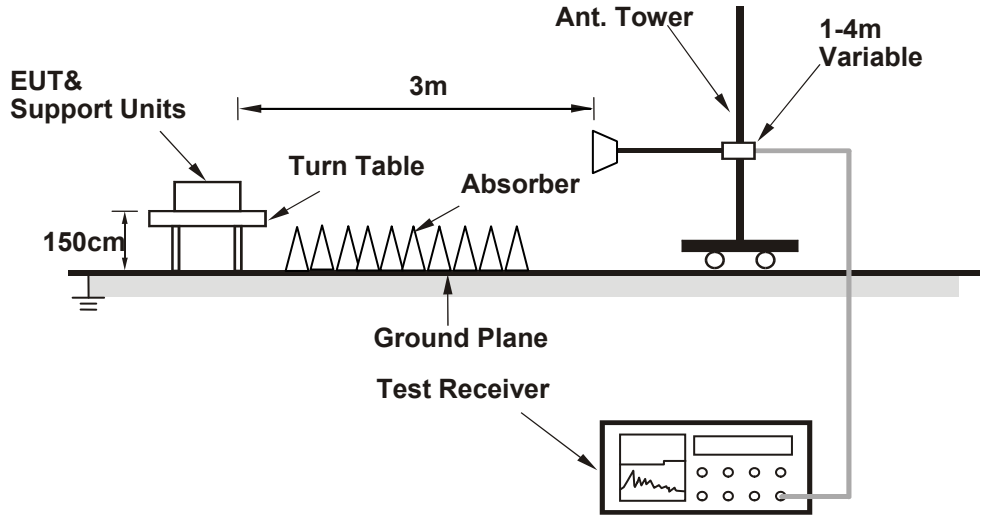
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

The EUT has been tested as an independent unit together with other necessary accessories or support units.

4.1.7 Test Results

Above 1GHz data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.1 PK	74.0	-4.9	1.00 H	207	63.0	6.1
2	5150.00	52.8 AV	54.0	-1.2	1.00 H	207	46.7	6.1
3	*5180.00	111.8 PK			1.00 H	207	71.6	40.2
4	*5180.00	101.2 AV			1.00 H	207	61.0	40.2
5	#10360.00	62.0 PK	74.0	-12.0	1.22 H	185	44.1	17.9
6	#10360.00	48.5 AV	54.0	-5.5	1.22 H	185	30.6	17.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.9 PK	74.0	-9.1	1.51 V	280	58.8	6.1
2	5150.00	50.1 AV	54.0	-3.9	1.51 V	280	44.0	6.1
3	*5180.00	109.4 PK			1.51 V	280	69.2	40.2
4	*5180.00	99.3 AV			1.51 V	280	59.1	40.2
5	#10360.00	61.4 PK	74.0	-12.6	1.38 V	254	43.5	17.9
6	#10360.00	48.0 AV	54.0	-6.0	1.38 V	254	30.1	17.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	114.3 PK			1.49 H	179	74.1	40.2
2	*5200.00	104.0 AV			1.49 H	179	63.8	40.2
3	#10400.00	62.1 PK	74.0	-11.9	1.69 H	263	43.9	18.2
4	#10400.00	48.9 AV	54.0	-5.1	1.69 H	263	30.7	18.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	111.2 PK			1.48 V	268	71.0	40.2
2	*5200.00	101.2 AV			1.48 V	268	61.0	40.2
3	#10400.00	62.0 PK	74.0	-12.0	1.55 V	201	43.8	18.2
4	#10400.00	48.5 AV	54.0	-5.5	1.55 V	201	30.3	18.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	114.9 PK			1.70 H	181	74.5	40.4
2	*5240.00	104.3 AV			1.70 H	181	63.9	40.4
3	5350.00	57.8 PK	74.0	-16.2	1.70 H	181	51.3	6.5
4	5350.00	45.3 AV	54.0	-8.7	1.70 H	181	38.8	6.5
5	#10480.00	62.1 PK	74.0	-11.9	2.18 H	194	43.7	18.4
6	#10480.00	48.4 AV	54.0	-5.6	2.18 H	194	30.0	18.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	112.0 PK			1.70 V	279	71.6	40.4
2	*5240.00	101.5 AV			1.70 V	279	61.1	40.4
3	5350.00	57.1 PK	74.0	-16.9	1.70 V	279	50.6	6.5
4	5350.00	44.6 AV	54.0	-9.4	1.70 V	279	38.1	6.5
5	#10480.00	61.9 PK	74.0	-12.1	1.82 V	341	43.5	18.4
6	#10480.00	48.7 AV	54.0	-5.3	1.82 V	341	30.3	18.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.6 PK	74.0	-15.4	1.25 H	77	52.5	6.1
2	5150.00	45.0 AV	54.0	-9.0	1.25 H	77	38.9	6.1
3	*5260.00	116.9 PK			1.25 H	77	76.5	40.4
4	*5260.00	106.0 AV			1.25 H	77	65.6	40.4
5	#10520.00	61.9 PK	74.0	-12.1	1.44 H	164	43.5	18.4
6	#10520.00	48.6 AV	54.0	-5.4	1.44 H	164	30.2	18.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.4 PK	74.0	-16.6	1.07 V	76	51.3	6.1
2	5150.00	44.3 AV	54.0	-9.7	1.07 V	76	38.2	6.1
3	*5260.00	112.9 PK			1.07 V	76	72.5	40.4
4	*5260.00	103.2 AV			1.07 V	76	62.8	40.4
5	#10520.00	60.5 PK	74.0	-13.5	1.45 V	266	42.1	18.4
6	#10520.00	48.0 AV	54.0	-6.0	1.45 V	266	29.6	18.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	116.7 PK			1.30 H	80	76.2	40.5
2	*5300.00	106.2 AV			1.30 H	80	65.7	40.5
3	10600.00	62.1 PK	74.0	-11.9	1.09 H	178	43.3	18.8
4	10600.00	48.9 AV	54.0	-5.1	1.09 H	178	30.1	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.2 PK			1.06 V	76	72.7	40.5
2	*5300.00	102.3 AV			1.06 V	76	61.8	40.5
3	10600.00	61.1 PK	74.0	-12.9	1.52 V	253	42.3	18.8
4	10600.00	48.6 AV	54.0	-5.4	1.52 V	253	29.8	18.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	114.2 PK			1.19 H	74	73.7	40.5
2	*5320.00	103.7 AV			1.19 H	74	63.2	40.5
3	5350.00	70.5 PK	74.0	-3.5	1.19 H	74	64.0	6.5
4	5350.00	52.8 AV	54.0	-1.2	1.19 H	74	46.3	6.5
5	10640.00	61.8 PK	74.0	-12.2	1.12 H	180	42.8	19.0
6	10640.00	49.0 AV	54.0	-5.0	1.12 H	180	30.0	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.8 PK			1.08 V	75	69.3	40.5
2	*5320.00	100.3 AV			1.08 V	75	59.8	40.5
3	5350.00	65.9 PK	74.0	-8.1	1.08 V	75	59.4	6.5
4	5350.00	49.8 AV	54.0	-4.2	1.08 V	75	43.3	6.5
5	10640.00	61.3 PK	74.0	-12.7	1.37 V	302	42.3	19.0
6	10640.00	48.4 AV	54.0	-5.6	1.37 V	302	29.4	19.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.1 PK	74.0	-6.9	1.24 H	81	60.4	6.7
2	5460.00	47.2 AV	54.0	-6.8	1.24 H	81	40.5	6.7
3	#5470.00	71.3 PK	74.0	-2.7	1.20 H	78	64.6	6.7
4	#5470.00	52.6 AV	54.0	-1.4	1.20 H	78	45.9	6.7
5	*5500.00	114.5 PK			1.29 H	85	73.6	40.9
6	*5500.00	104.2 AV			1.29 H	85	63.3	40.9
7	11000.00	60.8 PK	74.0	-13.2	1.30 H	57	41.5	19.3
8	11000.00	48.9 AV	54.0	-5.1	1.30 H	57	29.6	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.3 PK	74.0	-12.7	1.10 V	87	54.6	6.7
2	5460.00	45.4 AV	54.0	-8.6	1.10 V	87	38.7	6.7
3	#5470.00	68.0 PK	74.0	-6.0	1.05 V	85	61.3	6.7
4	#5470.00	49.4 AV	54.0	-4.6	1.05 V	85	42.7	6.7
5	*5500.00	109.8 PK			1.01 V	80	68.9	40.9
6	*5500.00	98.8 AV			1.01 V	80	57.9	40.9
7	11000.00	59.6 PK	74.0	-14.4	1.47 V	87	40.3	19.3
8	11000.00	47.7 AV	54.0	-6.3	1.47 V	87	28.4	19.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	112.5 PK			1.27 H	8	71.5	41.0
2	*5580.00	103.6 AV			1.27 H	8	62.6	41.0
3	11160.00	61.3 PK	74.0	-12.7	1.05 H	85	41.5	19.8
4	11160.00	49.4 AV	54.0	-4.6	1.05 H	85	29.6	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	108.6 PK			1.01 V	338	67.6	41.0
2	*5580.00	98.7 AV			1.01 V	338	57.7	41.0
3	11160.00	59.8 PK	74.0	-14.2	1.36 V	58	40.0	19.8
4	11160.00	48.2 AV	54.0	-5.8	1.36 V	58	28.4	19.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	115.6 PK			1.00 H	13	74.1	41.5
2	*5700.00	105.2 AV			1.00 H	13	63.7	41.5
3	#5725.00	71.9 PK	74.0	-2.1	1.00 H	12	64.6	7.3
4	#5725.00	52.9 AV	54.0	-1.1	1.00 H	12	45.6	7.3
5	11400.00	61.6 PK	74.0	-12.4	1.05 H	14	41.2	20.4
6	11400.00	49.7 AV	54.0	-4.3	1.05 H	14	29.3	20.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	108.0 PK			1.17 V	79	66.5	41.5
2	*5700.00	97.3 AV			1.17 V	79	55.8	41.5
3	#5725.00	68.2 PK	74.0	-5.8	1.21 V	82	60.9	7.3
4	#5725.00	49.9 AV	54.0	-4.1	1.21 V	82	42.6	7.3
5	11400.00	60.6 PK	74.0	-13.4	1.02 V	41	40.2	20.4
6	11400.00	48.5 AV	54.0	-5.5	1.02 V	41	28.1	20.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.3 PK	74.0	-14.7	1.36 H	15	52.6	6.7
2	#5470.00	47.3 AV	54.0	-6.7	1.36 H	15	40.6	6.7
3	*5720.00	115.4 PK			1.34 H	12	73.9	41.5
4	*5720.00	104.7 AV			1.34 H	12	63.2	41.5
5	#5850.00	60.3 PK	74.0	-13.7	1.39 H	15	52.6	7.7
6	#5850.00	48.3 AV	54.0	-5.7	1.39 H	15	40.6	7.7
7	11440.00	61.8 PK	74.0	-12.2	1.05 H	74	41.5	20.3
8	11440.00	49.8 AV	54.0	-4.2	1.05 H	74	29.5	20.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.0 PK	74.0	-17.0	1.15 V	81	50.3	6.7
2	#5470.00	46.1 AV	54.0	-7.9	1.15 V	81	39.4	6.7
3	*5720.00	110.9 PK			1.13 V	79	69.4	41.5
4	*5720.00	100.2 AV			1.13 V	79	58.7	41.5
5	#5850.00	58.4 PK	74.0	-15.6	1.17 V	85	50.7	7.7
6	#5850.00	47.1 AV	54.0	-6.9	1.17 V	85	39.4	7.7
7	11400.00	60.9 PK	74.0	-13.1	1.05 V	63	40.5	20.4
8	11400.00	48.5 AV	54.0	-5.5	1.05 V	63	28.1	20.4

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5612.00	59.2 PK	68.2	-9.0	1.00 H	216	52.3	6.9
2	*5745.00	113.3 PK			1.00 H	216	71.7	41.6
3	*5745.00	103.7 AV			1.00 H	216	62.1	41.6
4	#5950.40	60.3 PK	68.2	-7.9	1.00 H	216	52.5	7.8
5	11490.00	62.0 PK	74.0	-12.0	1.52 H	87	41.7	20.3
6	11490.00	50.4 AV	54.0	-3.6	1.52 H	87	30.1	20.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5603.20	60.1 PK	68.2	-8.1	1.83 V	276	53.2	6.9
2	*5745.00	111.0 PK			1.83 V	276	69.4	41.6
3	*5745.00	101.1 AV			1.83 V	276	59.5	41.6
4	#5955.20	59.8 PK	68.2	-8.4	1.83 V	276	51.9	7.9
5	11490.00	61.5 PK	74.0	-12.5	1.06 V	35	41.2	20.3
6	11490.00	48.7 AV	54.0	-5.3	1.06 V	35	28.4	20.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5611.20	59.3 PK	68.2	-8.9	1.47 H	189	52.4	6.9
2	*5785.00	115.9 PK			1.47 H	189	74.3	41.6
3	*5785.00	105.3 AV			1.47 H	189	63.7	41.6
4	#5936.80	59.7 PK	68.2	-8.5	1.47 H	189	51.9	7.8
5	11570.00	61.6 PK	74.0	-12.4	1.06 H	35	41.5	20.1
6	11570.00	49.7 AV	54.0	-4.3	1.06 H	35	29.6	20.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.80	58.9 PK	68.2	-9.3	1.94 V	273	51.8	7.1
2	*5785.00	111.0 PK			1.94 V	273	69.4	41.6
3	*5785.00	99.7 AV			1.94 V	273	58.1	41.6
4	#5944.80	60.0 PK	68.2	-8.2	1.94 V	273	52.2	7.8
5	11570.00	60.3 PK	74.0	-13.7	1.20 V	58	40.2	20.1
6	11570.00	48.5 AV	54.0	-5.5	1.20 V	58	28.4	20.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5608.80	59.0 PK	68.2	-9.2	1.00 H	217	52.1	6.9
2	*5825.00	113.6 PK			1.00 H	217	71.8	41.8
3	*5825.00	103.7 AV			1.00 H	217	61.9	41.8
4	#5986.40	60.1 PK	68.2	-8.1	1.05 H	217	52.2	7.9
5	11650.00	61.4 PK	74.0	-12.6	1.38 H	74	41.6	19.8
6	11650.00	49.1 AV	54.0	-4.9	1.38 H	74	29.3	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.60	59.4 PK	68.2	-8.8	1.30 V	282	52.4	7.0
2	*5825.00	110.0 PK			1.30 V	282	68.2	41.8
3	*5825.00	99.5 AV			1.30 V	282	57.7	41.8
4	#5981.60	61.0 PK	68.2	-7.2	1.30 V	282	53.1	7.9
5	11650.00	60.0 PK	74.0	-14.0	1.07 V	44	40.2	19.8
6	11650.00	48.5 AV	54.0	-5.5	1.07 V	44	28.7	19.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.7 PK	74.0	-5.3	1.00 H	261	62.6	6.1
2	5150.00	52.7 AV	54.0	-1.3	1.00 H	261	46.6	6.1
3	*5180.00	113.6 PK			1.00 H	261	73.4	40.2
4	*5180.00	102.4 AV			1.00 H	261	62.2	40.2
5	#10360.00	62.4 PK	74.0	-11.6	1.19 H	254	44.5	17.9
6	#10360.00	48.8 AV	54.0	-5.2	1.19 H	254	30.9	17.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.1 PK	74.0	-6.9	1.55 V	281	61.0	6.1
2	5150.00	51.3 AV	54.0	-2.7	1.55 V	281	45.2	6.1
3	*5180.00	109.7 PK			1.55 V	281	69.5	40.2
4	*5180.00	98.9 AV			1.55 V	281	58.7	40.2
5	#10360.00	62.2 PK	74.0	-11.8	1.29 V	288	44.3	17.9
6	#10360.00	48.0 AV	54.0	-6.0	1.29 V	288	30.1	17.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	113.5 PK			1.09 H	212	73.3	40.2
2	*5200.00	102.4 AV			1.09 H	212	62.2	40.2
3	#10400.00	61.4 PK	74.0	-12.6	1.68 H	215	43.2	18.2
4	#10400.00	48.7 AV	54.0	-5.3	1.68 H	215	30.5	18.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	111.5 PK			1.62 V	268	71.3	40.2
2	*5200.00	100.7 AV			1.62 V	268	60.5	40.2
3	#10400.00	61.3 PK	74.0	-12.7	1.43 V	218	43.1	18.2
4	#10400.00	48.4 AV	54.0	-5.6	1.43 V	218	30.2	18.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	113.8 PK			1.00 H	213	73.4	40.4
2	*5240.00	103.0 AV			1.00 H	213	62.6	40.4
3	5350.00	57.9 PK	74.0	-16.1	1.00 H	213	51.4	6.5
4	5350.00	44.6 AV	54.0	-9.4	1.00 H	213	38.1	6.5
5	#10480.00	61.5 PK	74.0	-12.5	2.27 H	162	43.1	18.4
6	#10480.00	49.2 AV	54.0	-4.8	2.27 H	162	30.8	18.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	110.6 PK			1.29 V	275	70.2	40.4
2	*5240.00	100.5 AV			1.29 V	275	60.1	40.4
3	5350.00	57.3 PK	74.0	-16.7	1.29 V	275	50.8	6.5
4	5350.00	44.4 AV	54.0	-9.6	1.29 V	275	37.9	6.5
5	#10480.00	60.8 PK	74.0	-13.2	3.11 V	125	42.4	18.4
6	#10480.00	48.8 AV	54.0	-5.2	3.11 V	125	30.4	18.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.0 PK	74.0	-16.0	1.27 H	76	51.9	6.1
2	5150.00	45.3 AV	54.0	-8.7	1.27 H	76	39.2	6.1
3	*5260.00	117.3 PK			1.27 H	76	76.9	40.4
4	*5260.00	106.5 AV			1.27 H	76	66.1	40.4
5	#10520.00	61.5 PK	74.0	-12.5	1.28 H	202	43.1	18.4
6	#10520.00	49.1 AV	54.0	-4.9	1.28 H	202	30.7	18.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.3 PK	74.0	-15.7	1.09 V	78	52.2	6.1
2	5150.00	45.0 AV	54.0	-9.0	1.09 V	78	38.9	6.1
3	*5260.00	113.6 PK			1.09 V	78	73.2	40.4
4	*5260.00	103.3 AV			1.09 V	78	62.9	40.4
5	#10520.00	61.3 PK	74.0	-12.7	1.18 V	140	42.9	18.4
6	#10520.00	48.2 AV	54.0	-5.8	1.18 V	140	29.8	18.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	116.3 PK			1.27 H	74	75.8	40.5
2	*5300.00	106.1 AV			1.27 H	74	65.6	40.5
3	10600.00	62.1 PK	74.0	-11.9	1.31 H	197	43.3	18.8
4	10600.00	49.1 AV	54.0	-4.9	1.31 H	197	30.3	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.6 PK			1.14 V	73	72.1	40.5
2	*5300.00	102.0 AV			1.14 V	73	61.5	40.5
3	10600.00	61.5 PK	74.0	-12.5	1.05 V	311	42.7	18.8
4	10600.00	48.2 AV	54.0	-5.8	1.05 V	311	29.4	18.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	114.1 PK			1.18 H	76	73.6	40.5
2	*5320.00	103.6 AV			1.18 H	76	63.1	40.5
3	5350.00	69.4 PK	74.0	-4.6	1.18 H	76	62.9	6.5
4	**5350.00**	**53.0 AV**	**54.0**	**-1.0**	**1.18 H**	**76**	**46.5**	**6.5**
5	10640.00	61.9 PK	74.0	-12.1	1.29 H	105	42.9	19.0
6	10640.00	48.9 AV	54.0	-5.1	1.29 H	105	29.9	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.1 PK			1.08 V	77	68.6	40.5
2	*5320.00	98.3 AV			1.08 V	77	57.8	40.5
3	5350.00	66.4 PK	74.0	-7.6	1.08 V	77	59.9	6.5
4	5350.00	49.6 AV	54.0	-4.4	1.08 V	77	43.1	6.5
5	10640.00	61.7 PK	74.0	-12.3	1.11 V	218	42.7	19.0
6	10640.00	48.2 AV	54.0	-5.8	1.11 V	218	29.2	19.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.8 PK	74.0	-12.2	1.16 H	75	55.1	6.7
2	5460.00	46.8 AV	54.0	-7.2	1.16 H	75	40.1	6.7
3	#5470.00	71.8 PK	74.0	-2.2	1.10 H	80	65.1	6.7
4	#5470.00	52.6 AV	54.0	-1.4	1.10 H	80	45.9	6.7
5	*5500.00	115.9 PK			1.10 H	80	75.0	40.9
6	*5500.00	105.2 AV			1.10 H	80	64.3	40.9
7	11000.00	59.9 PK	74.0	-14.1	1.25 H	142	40.6	19.3
8	11000.00	47.6 AV	54.0	-6.4	1.25 H	142	28.3	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.6 PK	74.0	-16.4	1.04 V	81	50.9	6.7
2	5460.00	45.4 AV	54.0	-8.6	1.04 V	81	38.7	6.7
3	#5470.00	64.9 PK	74.0	-9.1	1.11 V	82	58.2	6.7
4	#5470.00	49.3 AV	54.0	-4.7	1.11 V	82	42.6	6.7
5	*5500.00	110.0 PK			1.10 V	77	69.1	40.9
6	*5500.00	98.8 AV			1.10 V	77	57.9	40.9
7	11000.00	60.2 PK	74.0	-13.8	1.98 V	211	40.9	19.3
8	11000.00	47.7 AV	54.0	-6.3	1.98 V	211	28.4	19.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	116.3 PK			1.15 H	77	75.3	41.0
2	*5580.00	105.9 AV			1.15 H	77	64.9	41.0
3	11160.00	59.8 PK	74.0	-14.2	2.51 H	164	40.0	19.8
4	11160.00	47.5 AV	54.0	-6.5	2.51 H	164	27.7	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.9 PK			1.04 V	83	69.9	41.0
2	*5580.00	100.5 AV			1.04 V	83	59.5	41.0
3	11160.00	59.6 PK	74.0	-14.4	2.22 V	197	39.8	19.8
4	11160.00	47.2 AV	54.0	-6.8	2.22 V	197	27.4	19.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	113.0 PK			1.27 H	77	71.5	41.5
2	*5700.00	102.1 AV			1.27 H	77	60.6	41.5
3	#5725.00	70.7 PK	74.0	-3.3	1.35 H	78	63.4	7.3
4	#5725.00	52.6 AV	54.0	-1.4	1.35 H	78	45.3	7.3
5	11400.00	61.3 PK	74.0	-12.7	2.11 H	197	40.9	20.4
6	11400.00	48.2 AV	54.0	-5.8	2.11 H	197	27.8	20.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	108.0 PK			1.17 V	77	66.5	41.5
2	*5700.00	97.3 AV			1.17 V	77	55.8	41.5
3	#5725.00	68.2 PK	74.0	-5.8	1.15 V	79	60.9	7.3
4	#5725.00	49.6 AV	54.0	-4.4	1.15 V	79	42.3	7.3
5	11400.00	60.8 PK	74.0	-13.2	2.67 V	154	40.4	20.4
6	11400.00	47.9 AV	54.0	-6.1	2.67 V	154	27.5	20.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.2 PK	74.0	-16.8	1.29 H	78	50.5	6.7
2	#5470.00	44.7 AV	54.0	-9.3	1.29 H	78	38.0	6.7
3	*5720.00	116.0 PK			1.29 H	78	74.5	41.5
4	*5720.00	105.4 AV			1.29 H	78	63.9	41.5
5	#5850.00	56.2 PK	74.0	-17.8	1.33 H	80	48.5	7.7
6	#5850.00	45.8 AV	54.0	-8.2	1.33 H	80	38.1	7.7
7	11440.00	61.6 PK	74.0	-12.4	1.99 H	214	41.3	20.3
8	11440.00	48.5 AV	54.0	-5.5	1.99 H	214	28.2	20.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	56.2 PK	74.0	-17.8	1.30 V	80	49.5	6.7
2	#5470.00	44.2 AV	54.0	-9.8	1.30 V	80	37.5	6.7
3	*5720.00	110.8 PK			1.25 V	76	69.3	41.5
4	*5720.00	100.2 AV			1.25 V	76	58.7	41.5
5	#5850.00	55.7 PK	74.0	-18.3	1.21 V	77	48.0	7.7
6	#5850.00	45.2 AV	54.0	-8.8	1.21 V	77	37.5	7.7
7	11440.00	61.1 PK	74.0	-12.9	1.64 V	19	40.8	20.3
8	11440.00	48.0 AV	54.0	-6.0	1.64 V	19	27.7	20.3

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.80	59.6 PK	68.2	-8.6	1.02 H	217	52.6	7.0
2	*5745.00	114.4 PK			1.02 H	217	72.8	41.6
3	*5745.00	103.9 AV			1.02 H	217	62.3	41.6
4	#5977.60	60.1 PK	68.2	-8.1	1.02 H	217	52.2	7.9
5	11490.00	61.5 PK	74.0	-12.5	1.20 H	54	41.2	20.3
6	11490.00	49.9 AV	54.0	-4.1	1.20 H	54	29.6	20.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	58.9 PK	68.2	-9.3	1.59 V	272	51.8	7.1
2	*5745.00	109.6 PK			1.59 V	272	68.0	41.6
3	*5745.00	99.6 AV			1.59 V	272	58.0	41.6
4	#5967.20	59.7 PK	68.2	-8.5	1.59 V	272	51.8	7.9
5	11490.00	61.9 PK	74.0	-12.1	1.28 V	306	41.6	20.3
6	11490.00	48.9 AV	54.0	-5.1	1.28 V	306	28.6	20.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	59.6 PK	68.2	-8.6	1.00 H	218	52.6	7.0
2	*5785.00	113.2 PK			1.00 H	218	71.6	41.6
3	*5785.00	103.5 AV			1.00 H	218	61.9	41.6
4	#5945.60	59.9 PK	68.2	-8.3	1.00 H	218	52.1	7.8
5	11570.00	61.3 PK	74.0	-12.7	1.05 H	87	41.2	20.1
6	11570.00	49.7 AV	54.0	-4.3	1.05 H	87	29.6	20.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.60	59.1 PK	68.2	-9.1	1.93 V	275	52.0	7.1
2	*5785.00	109.7 PK			1.94 V	275	68.1	41.6
3	*5785.00	99.3 AV			1.94 V	275	57.7	41.6
4	#5938.40	59.8 PK	68.2	-8.4	1.93 V	275	52.0	7.8
5	11570.00	60.8 PK	74.0	-13.2	1.47 V	85	40.7	20.1
6	11570.00	48.6 AV	54.0	-5.4	1.47 V	85	28.5	20.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5610.40	59.2 PK	68.2	-9.0	1.00 H	216	52.3	6.9
2	*5825.00	113.6 PK			1.00 H	216	71.8	41.8
3	*5825.00	103.8 AV			1.00 H	216	62.0	41.8
4	#5935.20	59.8 PK	68.2	-8.4	1.00 H	216	52.0	7.8
5	11650.00	61.3 PK	74.0	-12.7	1.32 H	54	41.5	19.8
6	11650.00	49.4 AV	54.0	-4.6	1.32 H	54	29.6	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.60	59.2 PK	68.2	-9.0	1.07 V	292	52.2	7.0
2	*5825.00	108.2 PK			1.07 V	292	66.4	41.8
3	*5825.00	98.1 AV			1.07 V	292	56.3	41.8
4	#5970.40	59.1 PK	68.2	-9.1	1.07 V	292	51.2	7.9
5	11650.00	60.0 PK	74.0	-14.0	1.32 V	64	40.2	19.8
6	11650.00	48.1 AV	54.0	-5.9	1.32 V	64	28.3	19.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.7 PK	74.0	-2.3	1.51 H	184	65.6	6.1
2	5150.00	52.7 AV	54.0	-1.3	1.51 H	184	46.6	6.1
3	*5190.00	110.6 PK			1.51 H	183	70.4	40.2
4	*5190.00	100.4 AV			1.51 H	183	60.2	40.2
5	#10380.00	60.5 PK	74.0	-13.5	1.05 H	87	42.5	18.0
6	#10380.00	47.6 AV	54.0	-6.4	1.05 H	87	29.6	18.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.5 PK	74.0	-8.5	1.52 V	277	59.4	6.1
2	5150.00	50.1 AV	54.0	-3.9	1.52 V	277	44.0	6.1
3	*5190.00	104.0 PK			1.52 V	277	63.8	40.2
4	*5190.00	93.4 AV			1.52 V	277	53.2	40.2
5	#10360.00	59.1 PK	74.0	-14.9	1.25 V	87	41.2	17.9
6	#10360.00	46.8 AV	54.0	-7.2	1.25 V	87	28.9	17.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	110.6 PK			1.01 H	212	70.2	40.4
2	*5230.00	100.3 AV			1.01 H	212	59.9	40.4
3	5350.00	59.1 PK	74.0	-14.9	1.05 H	219	52.6	6.5
4	5350.00	48.1 AV	54.0	-5.9	1.05 H	219	41.6	6.5
5	#10460.00	59.4 PK	74.0	-14.6	1.32 H	54	41.2	18.2
6	#10460.00	47.8 AV	54.0	-6.2	1.32 H	54	29.6	18.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	107.9 PK			1.74 V	284	67.5	40.4
2	*5230.00	97.6 AV			1.74 V	284	57.2	40.4
3	5350.00	57.1 PK	74.0	-16.9	1.82 V	295	50.6	6.5
4	5350.00	46.0 AV	54.0	-8.0	1.82 V	295	39.5	6.5
5	#10460.00	58.7 PK	74.0	-15.3	1.30 V	56	40.5	18.2
6	#10460.00	46.8 AV	54.0	-7.2	1.30 V	56	28.6	18.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.1 PK	74.0	-14.9	1.28 H	80	53.0	6.1
2	5150.00	46.0 AV	54.0	-8.0	1.28 H	80	39.9	6.1
3	*5270.00	113.6 PK			1.25 H	77	73.2	40.4
4	*5270.00	103.4 AV			1.25 H	77	63.0	40.4
5	#10540.00	60.1 PK	74.0	-13.9	1.03 H	65	41.5	18.6
6	#10540.00	48.2 AV	54.0	-5.8	1.03 H	65	29.6	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.3 PK	74.0	-16.7	1.05 V	81	51.2	6.1
2	5150.00	44.8 AV	54.0	-9.2	1.05 V	81	38.7	6.1
3	*5270.00	109.8 PK			1.00 V	79	69.4	40.4
4	*5270.00	99.9 AV			1.00 V	79	59.5	40.4
5	#10540.00	59.2 PK	74.0	-14.8	1.35 V	87	40.6	18.6
6	#10540.00	47.2 AV	54.0	-6.8	1.35 V	87	28.6	18.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	107.6 PK			1.24 H	75	67.1	40.5
2	*5310.00	97.8 AV			1.24 H	75	57.3	40.5
3	5350.00	63.4 PK	74.0	-10.6	1.24 H	75	56.9	6.5
4	5350.00	51.6 AV	54.0	-2.4	1.24 H	75	45.1	6.5
5	5357.00	65.3 PK	74.0	-8.7	1.24 H	75	58.8	6.5
6	5357.00	52.8 AV	54.0	-1.2	1.24 H	75	46.3	6.5
7	10620.00	60.1 PK	74.0	-13.9	1.07 H	48	41.2	18.9
8	10620.00	48.5 AV	54.0	-5.5	1.07 H	48	29.6	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	102.4 PK			1.12 V	78	61.9	40.5
2	*5310.00	92.8 AV			1.12 V	78	52.3	40.5
3	5350.00	60.1 PK	74.0	-13.9	1.15 V	81	53.6	6.5
4	5350.00	47.0 AV	54.0	-7.0	1.15 V	81	40.5	6.5
5	5357.00	61.2 PK	74.0	-12.8	1.15 V	80	54.7	6.5
6	5357.00	47.7 AV	54.0	-6.3	1.15 V	80	41.2	6.5
7	10620.00	59.1 PK	74.0	-14.9	1.06 V	39	40.2	18.9
8	10620.00	47.5 AV	54.0	-6.5	1.06 V	39	28.6	18.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.4 PK	74.0	-8.6	1.22 H	77	58.7	6.7
2	5460.00	50.2 AV	54.0	-3.8	1.22 H	77	43.5	6.7
3	#5462.00	63.8 PK	74.0	-10.2	1.24 H	78	57.1	6.7
4	#5462.00	52.9 AV	54.0	-1.1	1.24 H	78	46.2	6.7
5	#5470.00	64.5 PK	74.0	-9.5	1.22 H	77	57.8	6.7
6	#5470.00	52.1 AV	54.0	-1.9	1.22 H	77	45.4	6.7
7	*5510.00	108.2 PK			1.24 H	76	67.3	40.9
8	*5510.00	97.7 AV			1.24 H	76	56.8	40.9
9	11020.00	60.4 PK	74.0	-13.6	2.07 H	155	41.1	19.3
10	11020.00	47.4 AV	54.0	-6.6	2.07 H	155	28.1	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	55.7 PK	74.0	-18.3	1.30 V	110	49.0	6.7
2	5460.00	45.1 AV	54.0	-8.9	1.30 V	110	38.4	6.7
3	#5462.00	58.1 PK	74.0	-15.9	1.38 V	101	51.4	6.7
4	#5462.00	47.7 AV	54.0	-6.3	1.38 V	101	41.0	6.7
5	#5470.00	56.5 PK	74.0	-17.5	1.33 V	109	49.8	6.7
6	#5470.00	46.9 AV	54.0	-7.1	1.33 V	109	40.2	6.7
7	*5510.00	101.9 PK			1.36 V	105	61.0	40.9
8	*5510.00	91.4 AV			1.36 V	105	50.5	40.9
9	11020.00	60.1 PK	74.0	-13.9	1.64 V	211	40.8	19.3
10	11020.00	47.2 AV	54.0	-6.8	1.64 V	211	27.9	19.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	113.3 PK			1.37 H	76	72.3	41.0
2	*5550.00	103.0 AV			1.37 H	76	62.0	41.0
3	11100.00	61.4 PK	74.0	-12.6	1.39 H	80	41.6	19.8
4	11100.00	48.2 AV	54.0	-5.8	1.39 H	80	28.4	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	108.6 PK			2.12 V	107	67.6	41.0
2	*5550.00	97.8 AV			2.12 V	107	56.8	41.0
3	11100.00	61.1 PK	74.0	-12.9	1.88 V	193	41.3	19.8
4	11100.00	47.9 AV	54.0	-6.1	1.88 V	193	28.1	19.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	113.0 PK			1.20 H	78	71.7	41.3
2	*5670.00	102.0 AV			1.20 H	78	60.7	41.3
3	#5725.00	64.1 PK	74.0	-9.9	1.20 H	78	56.8	7.3
4	#5725.00	52.9 AV	54.0	-1.1	1.20 H	78	45.6	7.3
5	10940.00	60.4 PK	74.0	-13.6	1.54 H	284	41.0	19.4
6	10940.00	47.2 AV	54.0	-6.8	1.54 H	284	27.8	19.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	105.6 PK			1.10 V	79	64.3	41.3
2	*5670.00	95.6 AV			1.10 V	79	54.3	41.3
3	#5725.00	63.1 PK	74.0	-10.9	1.10 V	80	55.8	7.3
4	#5725.00	50.0 AV	54.0	-4.0	1.10 V	80	42.7	7.3
5	10940.00	60.3 PK	74.0	-13.7	2.18 V	114	40.9	19.4
6	10940.00	47.3 AV	54.0	-6.7	2.18 V	114	27.9	19.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	58.6 PK	74.0	-15.4	1.08 H	13	51.9	6.7
2	#5470.00	47.2 AV	54.0	-6.8	1.08 H	13	40.5	6.7
3	*5710.00	111.5 PK			1.00 H	12	70.0	41.5
4	*5710.00	101.2 AV			1.00 H	12	59.7	41.5
5	#5850.00	59.2 PK	74.0	-14.8	1.05 H	20	51.5	7.7
6	#5850.00	48.2 AV	54.0	-5.8	1.05 H	20	40.5	7.7
7	11420.00	61.6 PK	74.0	-12.4	1.07 H	44	41.2	20.4
8	11420.00	49.8 AV	54.0	-4.2	1.07 H	44	29.4	20.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.1 PK	74.0	-16.9	1.07 V	88	50.4	6.7
2	#5470.00	46.1 AV	54.0	-7.9	1.07 V	88	39.4	6.7
3	*5710.00	107.1 PK			1.01 V	81	65.6	41.5
4	*5710.00	97.2 AV			1.01 V	81	55.7	41.5
5	#5850.00	58.0 PK	74.0	-16.0	1.05 V	90	50.3	7.7
6	#5850.00	47.2 AV	54.0	-6.8	1.05 V	90	39.5	7.7
7	11420.00	60.9 PK	74.0	-13.1	1.03 V	26	40.5	20.4
8	11420.00	48.8 AV	54.0	-5.2	1.03 V	26	28.4	20.4

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.00	60.2 PK	68.2	-8.0	1.86 H	275	53.2	7.0
2	*5755.00	111.8 PK			1.43 H	189	70.2	41.6
3	*5755.00	101.8 AV			1.43 H	189	60.2	41.6
4	#5996.00	60.1 PK	68.2	-8.1	1.86 H	275	52.2	7.9
5	11510.00	61.4 PK	74.0	-12.6	1.05 H	21	41.2	20.2
6	11510.00	49.8 AV	54.0	-4.2	1.05 H	21	29.6	20.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.60	58.6 PK	68.2	-9.6	1.85 V	274	51.6	7.0
2	*5755.00	107.7 PK			1.85 V	274	66.1	41.6
3	*5755.00	96.6 AV			1.85 V	274	55.0	41.6
4	#5955.20	59.9 PK	68.2	-8.3	1.85 V	274	52.0	7.9
5	11510.00	60.2 PK	74.0	-13.8	1.07 V	41	40.0	20.2
6	11510.00	48.6 AV	54.0	-5.4	1.07 V	41	28.4	20.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.60	58.6 PK	68.2	-9.6	1.34 H	190	51.6	7.0
2	*5795.00	112.2 PK			1.34 H	190	70.5	41.7
3	*5795.00	102.1 AV			1.34 H	190	60.4	41.7
4	#5956.00	60.2 PK	68.2	-8.0	1.34 H	190	52.3	7.9
5	11590.00	61.3 PK	74.0	-12.7	1.30 H	58	41.2	20.1
6	11590.00	49.7 AV	54.0	-4.3	1.30 H	58	29.6	20.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5618.40	58.7 PK	68.2	-9.5	1.91 V	273	51.8	6.9
2	*5795.00	108.2 PK			1.91 V	273	66.5	41.7
3	*5795.00	96.8 AV			1.91 V	273	55.1	41.7
4	#5955.20	60.2 PK	68.2	-8.0	1.91 V	273	52.3	7.9
5	11590.00	60.6 PK	74.0	-13.4	1.05 V	26	40.5	20.1
6	11590.00	48.7 AV	54.0	-5.3	1.05 V	26	28.6	20.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.6 PK	74.0	-7.4	1.09 H	211	60.5	6.1
2	5150.00	52.6 AV	54.0	-1.4	1.09 H	211	46.5	6.1
3	*5210.00	103.8 PK			1.10 H	215	63.5	40.3
4	*5210.00	93.7 AV			1.10 H	215	53.4	40.3
5	#10420.00	59.6 PK	74.0	-14.4	1.33 H	25	41.5	18.1
6	#10420.00	47.7 AV	54.0	-6.3	1.33 H	25	29.6	18.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.1 PK	74.0	-8.9	1.89 V	285	59.0	6.1
2	5150.00	49.3 AV	54.0	-4.7	1.89 V	285	43.2	6.1
3	*5210.00	101.1 PK			1.85 V	283	60.8	40.3
4	*5210.00	90.9 AV			1.85 V	283	50.6	40.3
5	#10420.00	58.6 PK	74.0	-15.4	1.35 V	87	40.5	18.1
6	#10420.00	46.2 AV	54.0	-7.8	1.35 V	87	28.1	18.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.7 PK	74.0	-16.3	1.28 H	75	51.6	6.1
2	5150.00	44.6 AV	54.0	-9.4	1.28 H	75	38.5	6.1
3	*5290.00	105.6 PK			1.28 H	75	65.2	40.4
4	*5290.00	94.8 AV			1.28 H	75	54.4	40.4
5	5350.00	69.2 PK	74.0	-4.8	1.28 H	75	62.7	6.5
6	5350.00	52.9 AV	54.0	-1.1	1.28 H	75	46.4	6.5
7	#10580.00	60.5 PK	74.0	-13.5	1.15 H	109	41.8	18.7
8	#10580.00	47.8 AV	54.0	-6.2	1.15 H	109	29.1	18.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	1.03 V	79	50.7	6.1
2	5150.00	44.2 AV	54.0	-9.8	1.03 V	79	38.1	6.1
3	*5290.00	103.2 PK			1.03 V	79	62.8	40.4
4	*5290.00	92.5 AV			1.03 V	79	52.1	40.4
5	5350.00	65.5 PK	74.0	-8.5	1.03 V	79	59.0	6.5
6	5350.00	50.7 AV	54.0	-3.3	1.03 V	79	44.2	6.5
7	#10580.00	60.1 PK	74.0	-13.9	1.35 V	220	41.4	18.7
8	#10580.00	47.5 AV	54.0	-6.5	1.35 V	220	28.8	18.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.9 PK	74.0	-8.1	1.31 H	81	59.2	6.7
2	5460.00	52.2 AV	54.0	-1.8	1.31 H	81	45.5	6.7
3	#5470.00	70.1 PK	74.0	-3.9	1.29 H	78	63.4	6.7
4	#5470.00	52.6 AV	54.0	-1.4	1.29 H	78	45.9	6.7
5	*5530.00	106.5 PK			1.29 H	78	65.6	40.9
6	*5530.00	95.8 AV			1.29 H	78	54.9	40.9
7	11060.00	61.1 PK	74.0	-12.9	1.08 H	41	41.5	19.6
8	11060.00	49.3 AV	54.0	-4.7	1.08 H	41	29.7	19.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.6 PK	74.0	-11.4	1.11 V	85	55.9	6.7
2	5460.00	48.7 AV	54.0	-5.3	1.11 V	85	42.0	6.7
3	#5470.00	65.7 PK	74.0	-8.3	1.10 V	90	59.0	6.7
4	#5470.00	49.9 AV	54.0	-4.1	1.10 V	90	43.2	6.7
5	*5530.00	101.3 PK			1.09 V	80	60.4	40.9
6	*5530.00	91.0 AV			1.09 V	80	50.1	40.9
7	11060.00	60.1 PK	74.0	-13.9	1.05 V	64	40.5	19.6
8	11060.00	48.0 AV	54.0	-6.0	1.05 V	64	28.4	19.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 122	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	65.1 PK	74.0	-8.9	1.25 H	20	58.4	6.7
2	#5470.00	49.7 AV	54.0	-4.3	1.25 H	20	43.0	6.7
3	*5610.00	109.1 PK			1.19 H	14	68.0	41.1
4	*5610.00	98.3 AV			1.19 H	14	57.2	41.1
5	11220.00	61.4 PK	74.0	-12.6	1.32 H	64	41.5	19.9
6	11220.00	49.5 AV	54.0	-4.5	1.32 H	64	29.6	19.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.3 PK	74.0	-14.7	1.05 V	196	52.6	6.7
2	#5470.00	48.2 AV	54.0	-5.8	1.05 V	196	41.5	6.7
3	*5610.00	103.9 PK			1.00 V	190	62.8	41.1
4	*5610.00	93.5 AV			1.00 V	190	52.4	41.1
5	11220.00	60.4 PK	74.0	-13.6	1.06 V	35	40.5	19.9
6	11220.00	48.3 AV	54.0	-5.7	1.06 V	35	28.4	19.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 138	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.3 PK	74.0	-14.7	1.11 H	15	52.6	6.7
2	#5470.00	47.2 AV	54.0	-6.8	1.11 H	15	40.5	6.7
3	*5690.00	109.8 PK			1.00 H	10	68.5	41.3
4	*5690.00	98.7 AV			1.00 H	10	57.4	41.3
5	#5850.00	60.6 PK	74.0	-13.4	1.07 H	19	52.9	7.7
6	#5850.00	48.3 AV	54.0	-5.7	1.07 H	19	40.6	7.7
7	11380.00	61.8 PK	74.0	-12.2	1.05 H	10	41.5	20.3
8	11380.00	50.2 AV	54.0	-3.8	1.05 H	10	29.9	20.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.3 PK	74.0	-16.7	1.15 V	81	50.6	6.7
2	#5470.00	46.4 AV	54.0	-7.6	1.15 V	81	39.7	6.7
3	*5690.00	105.8 PK			1.09 V	79	64.5	41.3
4	*5690.00	94.5 AV			1.09 V	79	53.2	41.3
5	#5850.00	58.6 PK	74.0	-15.4	1.14 V	85	50.9	7.7
6	#5850.00	47.4 AV	54.0	-6.6	1.14 V	85	39.7	7.7
7	11380.00	60.8 PK	74.0	-13.2	1.08 V	65	40.5	20.3
8	11380.00	48.7 AV	54.0	-5.3	1.08 V	65	28.4	20.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	65.1 PK	68.2	-3.1	1.61 H	191	58.0	7.1
2	*5775.00	110.3 PK			1.61 H	191	68.7	41.6
3	*5775.00	99.5 AV			1.61 H	191	57.9	41.6
4	#5922.40	65.1 PK	70.1	-5.0	1.61 H	191	57.3	7.8
5	11550.00	61.4 PK	74.0	-12.6	1.32 H	20	41.2	20.2
6	11550.00	49.5 AV	54.0	-4.5	1.32 H	20	29.3	20.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	62.6 PK	68.2	-5.6	1.82 V	274	55.5	7.1
2	*5775.00	105.5 PK			1.82 V	274	63.9	41.6
3	*5775.00	94.3 AV			1.82 V	274	52.7	41.6
4	#5929.60	61.0 PK	68.2	-7.2	1.82 V	274	53.2	7.8
5	11550.00	60.4 PK	74.0	-13.6	1.02 V	54	40.2	20.2
6	11550.00	48.3 AV	54.0	-5.7	1.02 V	54	28.1	20.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz Worst-Case Data: 802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	TEST MODE	A

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	68.71	24.5 QP	40.0	-15.5	2.00 H	205	40.4	-15.9
2	113.34	35.5 QP	43.5	-8.0	1.50 H	158	52.3	-16.8
3	214.24	19.0 QP	43.5	-24.5	1.50 H	201	35.1	-16.1
4	575.15	23.4 QP	46.0	-22.6	2.00 H	331	30.2	-6.8
5	730.38	36.4 QP	46.0	-9.6	1.50 H	58	39.8	-3.4
6	939.95	33.8 QP	46.0	-12.2	1.50 H	183	33.2	0.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.42	30.2 QP	40.0	-9.8	1.00 V	7	44.9	-14.7
2	109.46	30.6 QP	43.5	-12.9	1.00 V	247	47.8	-17.2
3	233.64	16.6 QP	46.0	-29.4	1.00 V	7	31.9	-15.3
4	470.37	21.6 QP	46.0	-24.4	1.24 V	49	30.5	-8.9
5	798.30	27.0 QP	46.0	-19.0	1.50 V	120	29.0	-2.0
6	936.07	35.2 QP	46.0	-10.8	1.50 V	7	35.0	0.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	TEST MODE	B

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	66.77	27.2 QP	40.0	-12.8	2.00 H	201	43.0	-15.8
2	115.28	33.6 QP	43.5	-9.9	1.50 H	327	50.2	-16.6
3	210.36	34.1 QP	43.5	-9.4	1.00 H	282	50.2	-16.1
4	280.21	35.0 QP	46.0	-11.0	1.00 H	261	47.4	-12.4
5	406.34	27.1 QP	46.0	-18.9	2.00 H	178	37.4	-10.3
6	883.68	27.1 QP	46.0	-18.9	1.50 H	7	28.1	-1.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.42	32.4 QP	40.0	-7.6	1.24 V	308	47.1	-14.7
2	68.71	36.0 QP	40.0	-4.0	1.00 V	282	51.9	-15.9
3	113.34	30.6 QP	43.5	-12.9	1.00 V	254	47.4	-16.8
4	253.05	30.8 QP	46.0	-15.2	1.24 V	229	44.7	-13.9
5	414.10	28.0 QP	46.0	-18.0	1.24 V	158	38.1	-10.1
6	891.44	30.2 QP	46.0	-15.8	2.00 V	179	31.1	-0.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	TEST MODE	C

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.42	20.7 QP	40.0	-19.3	1.24 H	121	35.4	-14.7
2	107.52	28.4 QP	43.5	-15.1	1.24 H	144	45.7	-17.3
3	142.44	19.3 QP	43.5	-24.2	1.24 H	257	33.3	-14.0
4	289.91	19.0 QP	46.0	-27.0	1.24 H	145	31.3	-12.3
5	658.59	24.9 QP	46.0	-21.1	1.50 H	239	29.8	-4.9
6	831.29	26.8 QP	46.0	-19.2	1.00 H	264	28.4	-1.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.42	31.0 QP	40.0	-9.0	1.00 V	7	45.7	-14.7
2	107.52	25.2 QP	43.5	-18.3	2.00 V	267	42.5	-17.3
3	171.55	14.2 QP	43.5	-29.3	1.50 V	201	28.2	-14.0
4	443.21	20.9 QP	46.0	-25.1	1.50 V	133	30.2	-9.3
5	643.07	24.2 QP	46.0	-21.8	1.00 V	7	29.3	-5.1
6	879.80	26.6 QP	46.0	-19.4	1.50 V	20	27.6	-1.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	TEST MODE	D

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	74.53	24.6 QP	40.0	-15.4	2.00 H	284	41.2	-16.6
2	99.75	26.3 QP	43.5	-17.2	1.50 H	112	44.8	-18.5
3	124.98	26.2 QP	43.5	-17.3	2.00 H	121	41.9	-15.7
4	270.51	27.6 QP	46.0	-18.4	1.00 H	149	40.5	-12.9
5	313.20	29.8 QP	46.0	-16.2	1.00 H	255	41.5	-11.7
6	932.19	39.3 QP	46.0	-6.7	1.25 H	262	39.1	0.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	62.89	24.9 QP	40.0	-15.1	1.00 V	20	40.1	-15.2
2	74.53	28.8 QP	40.0	-11.2	1.00 V	238	45.4	-16.6
3	134.68	25.1 QP	43.5	-18.4	1.50 V	104	39.8	-14.7
4	297.68	22.8 QP	46.0	-23.2	2.00 V	276	34.9	-12.1
5	491.72	26.7 QP	46.0	-19.3	2.00 V	7	35.3	-8.6
6	939.95	40.8 QP	46.0	-5.2	1.25 V	313	40.2	0.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	TEST MODE	E

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	47.36	25.7 QP	40.0	-14.3	1.00 H	43	40.2	-14.5
2	68.71	21.8 QP	40.0	-18.2	1.49 H	263	37.7	-15.9
3	111.40	28.5 QP	43.5	-15.0	1.49 H	158	45.5	-17.0
4	268.57	21.5 QP	46.0	-24.5	1.00 H	180	34.6	-13.1
5	610.08	23.7 QP	46.0	-22.3	1.00 H	346	29.3	-5.6
6	938.01	38.4 QP	46.0	-7.6	1.00 H	130	37.9	0.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	68.71	28.6 QP	40.0	-11.4	2.00 V	267	44.5	-15.9
2	121.10	27.3 QP	43.5	-16.2	2.00 V	226	43.2	-15.9
3	268.57	17.7 QP	46.0	-28.3	1.50 V	213	30.8	-13.1
4	435.44	19.7 QP	46.0	-26.3	1.01 V	13	29.0	-9.3
5	681.87	24.5 QP	46.0	-21.5	1.50 V	91	29.0	-4.5
6	936.07	38.2 QP	46.0	-7.8	1.01 V	91	38.0	0.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 21, 2016	Nov. 20, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

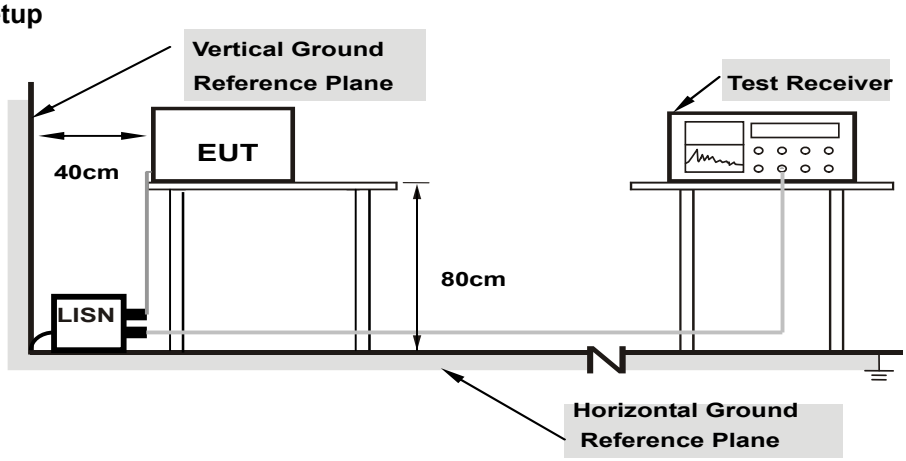
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

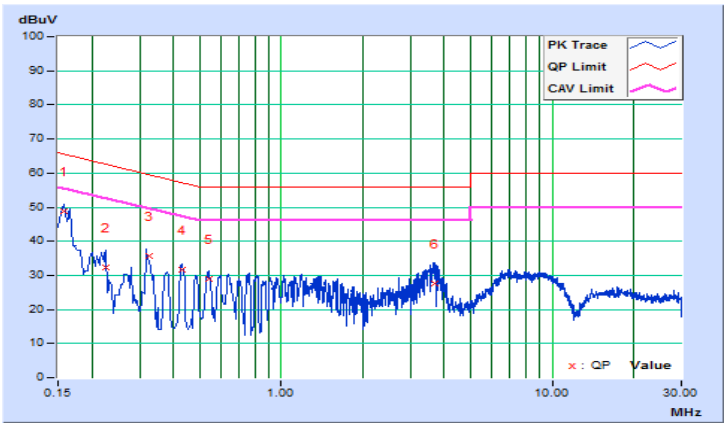
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15719	10.41	38.44	28.96	48.85	39.37	65.61	55.61	-16.76	-16.24
2	0.22434	10.44	21.72	9.64	32.16	20.08	62.66	52.66	-30.50	-32.58
3	0.32595	10.48	25.18	17.06	35.66	27.54	59.55	49.55	-23.89	-22.01
4	0.42895	10.51	21.02	14.62	31.53	25.13	57.27	47.27	-25.74	-22.14
5	0.53804	10.50	18.35	12.05	28.85	22.55	56.00	46.00	-27.15	-23.45
6	3.66900	10.64	17.04	1.79	27.68	12.43	56.00	46.00	-28.32	-33.57

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

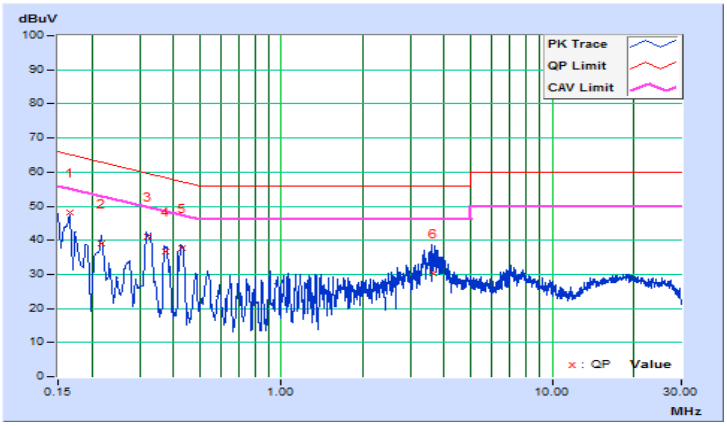


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16526	10.17	38.03	26.65	48.20	36.82	65.20	55.20	-17.00	-18.38
2	0.21565	10.20	28.83	21.39	39.03	31.59	62.98	52.98	-23.95	-21.39
3	**0.32204**	**10.22**	**30.95**	**27.62**	**41.17**	**37.84**	**59.65**	**49.65**	**-18.48**	**-11.81**
4	0.37403	10.23	26.38	22.27	36.61	32.50	58.41	48.41	-21.80	-15.91
5	0.43152	10.23	27.32	23.86	37.55	34.09	57.22	47.22	-19.67	-13.13
6	3.62498	10.40	19.95	4.74	30.35	15.14	56.00	46.00	-25.65	-30.86

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

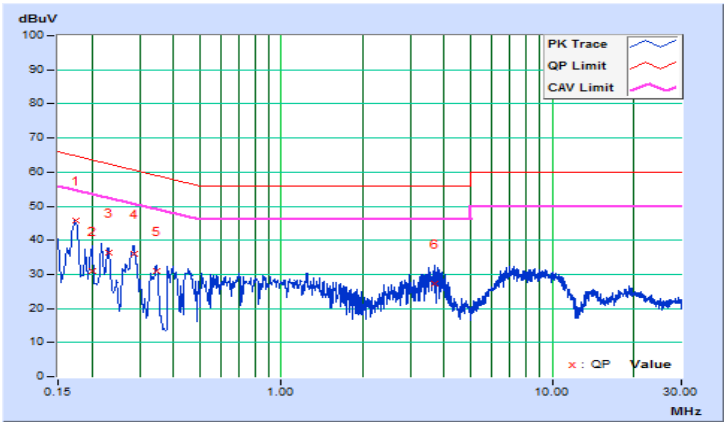


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17374	10.42	35.43	25.71	45.85	36.13	64.78	54.78	-18.93	-18.65
2	0.19978	10.43	20.64	6.10	31.07	16.53	63.62	53.62	-32.55	-37.09
3	0.22972	10.44	25.80	16.35	36.24	26.79	62.46	52.46	-26.22	-25.67
4	0.28513	10.46	25.71	18.04	36.17	28.50	60.67	50.67	-24.50	-22.17
5	0.34560	10.49	20.40	13.17	30.89	23.66	59.07	49.07	-28.18	-25.41
6	3.66900	10.64	16.54	1.91	27.18	12.55	56.00	46.00	-28.82	-33.45

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

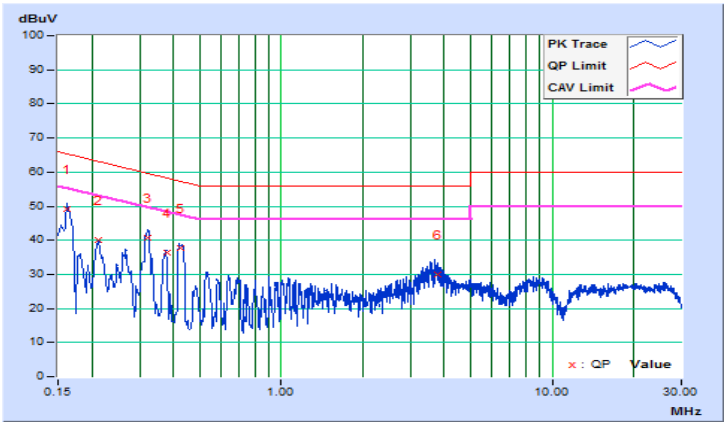


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16096	10.16	39.04	31.07	49.20	41.23	65.41	55.41	-16.21	-14.18
2	0.21059	10.20	30.00	22.30	40.20	32.50	63.18	53.18	-22.98	-20.68
3	0.32017	10.22	30.67	27.20	40.89	37.42	59.70	49.70	-18.81	-12.28
4	0.37700	10.23	26.09	20.47	36.32	30.70	58.35	48.35	-22.03	-17.65
5	0.42370	10.23	27.51	23.37	37.74	33.60	57.38	47.38	-19.64	-13.78
6	3.76284	10.41	19.52	4.35	29.93	14.76	56.00	46.00	-26.07	-31.24

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

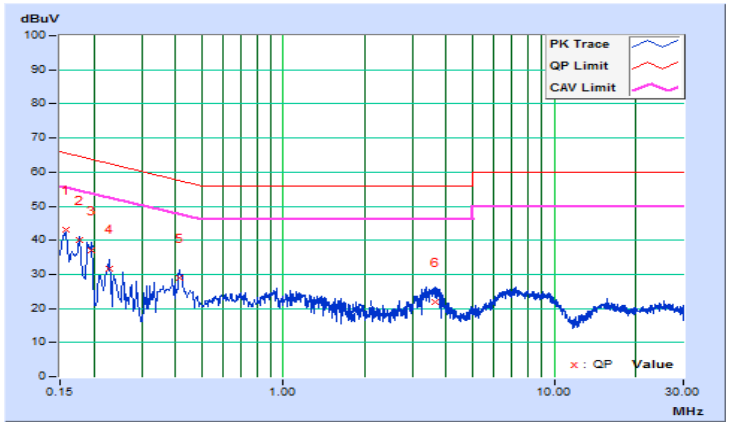


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15719	10.41	32.77	18.53	43.18	28.94	65.61	55.61	-22.43	-26.67
2	0.17605	10.42	29.55	16.44	39.97	26.86	64.67	54.67	-24.70	-27.81
3	0.19510	10.43	26.73	14.76	37.16	25.19	63.82	53.82	-26.66	-28.63
4	0.22672	10.44	21.08	8.88	31.52	19.32	62.57	52.57	-31.05	-33.25
5	0.41233	10.51	18.32	8.63	28.83	19.14	57.60	47.60	-28.77	-28.46
6	3.62990	10.63	11.14	2.06	21.77	12.69	56.00	46.00	-34.23	-33.31

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

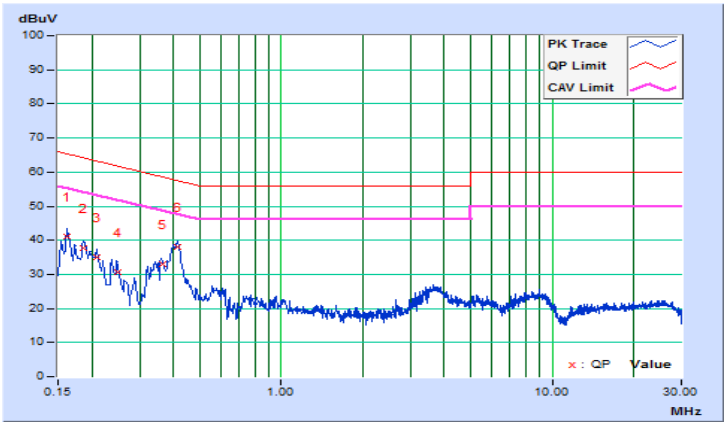


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16096	10.16	30.89	18.67	41.05	28.83	65.41	55.41	-24.36	-26.58
2	0.18508	10.19	27.45	16.16	37.64	26.35	64.25	54.25	-26.61	-27.90
3	0.20783	10.20	24.82	11.94	35.02	22.14	63.29	53.29	-28.27	-31.15
4	0.24796	10.21	20.39	10.60	30.60	20.81	61.83	51.83	-31.23	-31.02
5	0.36505	10.22	22.94	15.54	33.16	25.76	58.61	48.61	-25.45	-22.85
6	0.41233	10.23	27.97	21.07	38.20	31.30	57.60	47.60	-19.40	-16.30

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

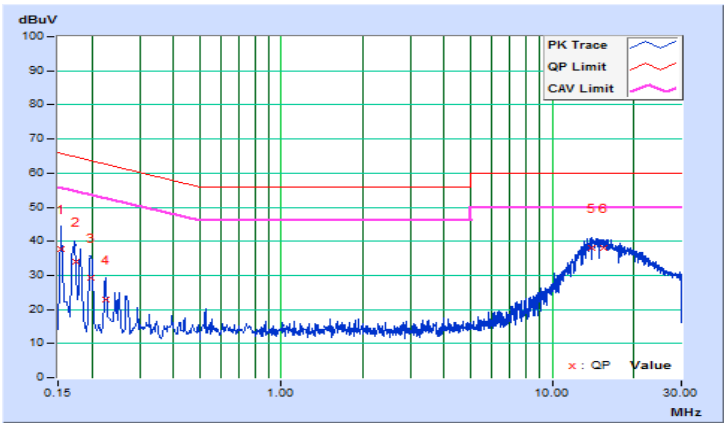


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.41	27.26	2.38	37.67	12.79	65.79	55.79	-28.12	-43.00
2	0.17374	10.42	23.62	0.72	34.04	11.14	64.78	54.78	-30.74	-43.64
3	0.19717	10.43	18.83	-1.12	29.26	9.31	63.73	53.73	-34.47	-44.42
4	0.22434	10.44	12.32	-2.61	22.76	7.83	62.66	52.66	-39.90	-44.83
5	13.91320	11.10	26.88	18.72	37.98	29.82	60.00	50.00	-22.02	-20.18
6	15.43419	11.18	26.71	18.39	37.89	29.57	60.00	50.00	-22.11	-20.43

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

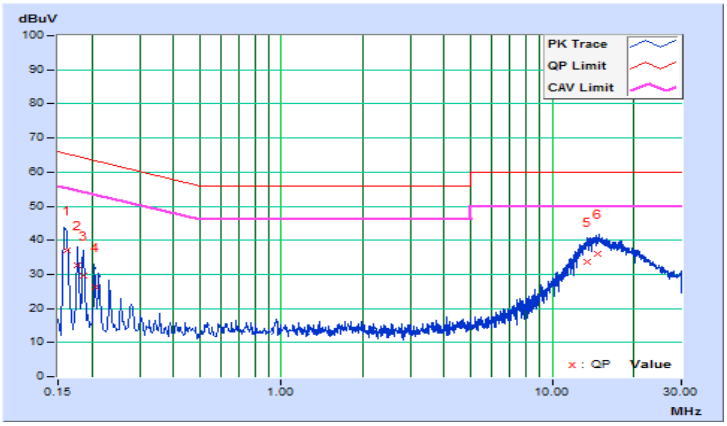


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16173	10.17	26.79	2.17	36.96	12.34	65.37	55.37	-28.41	-43.03
2	0.17605	10.18	22.34	0.34	32.52	10.52	64.67	54.67	-32.15	-44.15
3	0.18508	10.19	19.50	-0.88	29.69	9.31	64.25	54.25	-34.56	-44.94
4	0.20511	10.20	16.00	-1.82	26.20	8.38	63.40	53.40	-37.20	-45.02
5	13.41272	10.78	22.84	15.68	33.62	26.46	60.00	50.00	-26.38	-23.54
6	14.66783	10.83	25.19	17.59	36.02	28.42	60.00	50.00	-23.98	-21.58

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

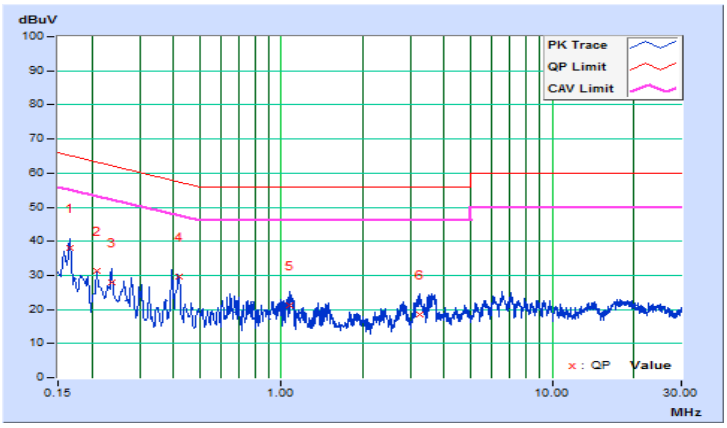


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	E		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16526	10.41	27.71	15.22	38.12	25.63	65.20	55.20	-27.08	-29.57
2	0.20783	10.43	21.02	7.40	31.45	17.83	63.29	53.29	-31.84	-35.46
3	0.23586	10.44	17.62	4.70	28.06	15.14	62.24	52.24	-34.18	-37.10
4	0.41979	10.51	19.25	8.72	29.76	19.23	57.45	47.45	-27.69	-28.22
5	1.07025	10.46	10.80	-0.32	21.26	10.14	56.00	46.00	-34.74	-35.86
6	3.23668	10.61	8.07	-1.90	18.68	8.71	56.00	46.00	-37.32	-37.29

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

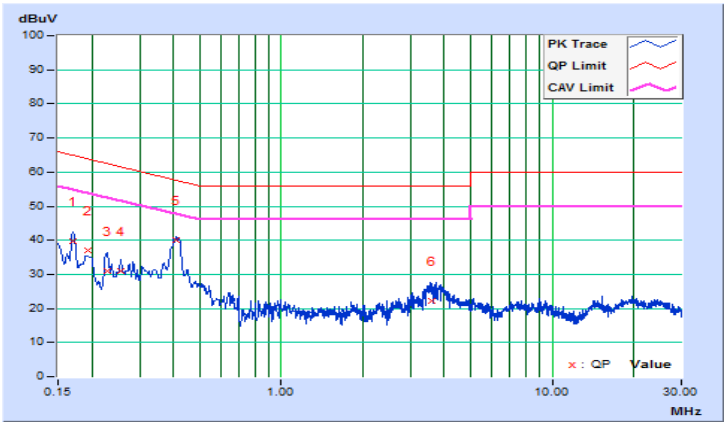


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	E		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16967	10.17	29.60	21.41	39.77	31.58	64.98	54.98	-25.21	-23.40
2	0.19255	10.19	27.00	17.91	37.19	28.10	63.93	53.93	-26.74	-25.83
3	0.22672	10.20	20.82	9.93	31.02	20.13	62.57	52.57	-31.55	-32.44
4	0.25458	10.21	20.80	11.35	31.01	21.56	61.61	51.61	-30.60	-30.05
5	0.40693	10.23	29.76	21.41	39.99	31.64	57.71	47.71	-17.72	-16.07
6	3.58298	10.40	11.68	0.94	22.08	11.34	56.00	46.00	-33.92	-34.66

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

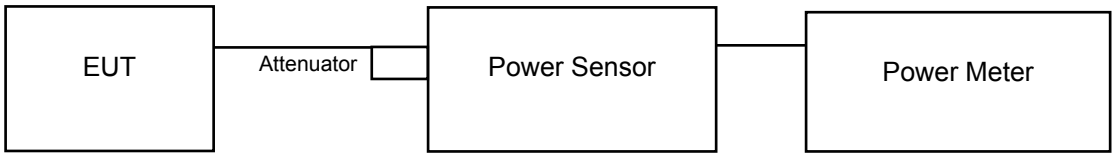
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

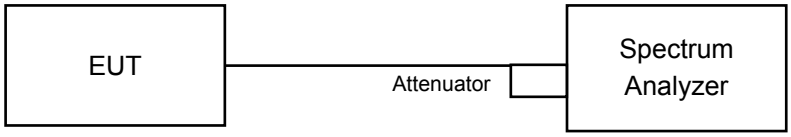
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

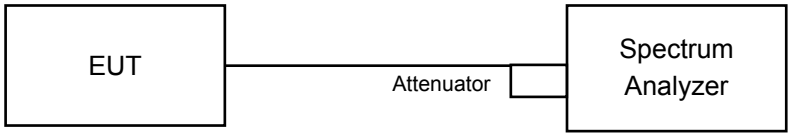
For Power Output
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40)
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

For 802.11ac (VHT80)
a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
b. Set sweep trigger to “free run”.
c. Set RBW = 1 MHz
d. Set VBW ≥ 3 MHz
e. Number of points in sweep ≥ 2 Span / RBW
f. Sweep time ≤ (number of points in sweep) * T
g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
h. Detector = RMS
i. Trace mode = max hold
j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

For 26dB Bandwidth
a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

For Occupied Bandwidth
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	61.802	17.91	24.00	Pass
40	5200	62.373	17.95	24.00	Pass
48	5240	61.944	17.92	24.00	Pass
52	5260	68.234	18.34	24.00	Pass
60	5300	**69.984**	18.45	24.00	Pass
64	5320	55.081	17.41	24.00	Pass
100	5500	66.988	18.26	24.00	Pass
116	5580	67.764	18.31	24.00	Pass
140	5700	53.703	17.30	24.00	Pass
144	5720 For U-NII-2C	18.838	12.75	24.00	Pass
144	5720 For U-NII-3	4.709	6.73	30.00	Pass
149	5745	53.951	17.32	30.00	Pass
157	5785	55.590	17.45	30.00	Pass
165	5825	53.211	17.26	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(25.00) = 24.98 dBm > 24dBm
2. 11dBm + 10log(32.37) = 26.10 dBm > 24dBm
3. 11dBm + 10log(27.51) = 25.39 dBm > 24dBm
4. 11dBm + 10log(30.29) = 25.81 dBm > 24dBm
5. 11dBm + 10log(39.42) = 26.96 dBm > 24dBm
6. 11dBm + 10log(24.58) = 24.91 dBm > 24dBm
7. 11dBm + 10log(5725.00 - 5700.27) = 24.93 dBm > 24dBm

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
144	5720	54.702	17.38

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	62.087	17.93	24.00	Pass
40	5200	**62.517**	17.96	24.00	Pass
48	5240	61.660	17.90	24.00	Pass
52	5260	67.608	18.30	24.00	Pass
60	5300	68.707	18.37	24.00	Pass
64	5320	67.143	18.27	24.00	Pass
100	5500	67.298	18.28	24.00	Pass
116	5580	**69.663**	18.43	24.00	Pass
140	5700	46.559	16.68	24.00	Pass
144	5720 For U-NII-2C	18.622	12.70	24.00	Pass
144	5720 For U-NII-3	7.763	8.90	30.00	Pass
149	5745	53.827	17.31	30.00	Pass
157	5785	54.075	17.33	30.00	Pass
165	5825	54.828	17.39	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(27.93) = 25.46 dBm > 24dBm
2. 11dBm + 10log(29.25) = 25.66 dBm > 24dBm
3. 11dBm + 10log(23.60) = 24.73 dBm > 24dBm
4. 11dBm + 10log(27.24) = 25.35 dBm > 24dBm
5. 11dBm + 10log(40.71) = 27.10 dBm > 24dBm
6. 11dBm + 10log(24.90) = 24.96 dBm > 24dBm
7. 11dBm + 10log(5725.00 - 5699.29) = 25.10 dBm > 24dBm

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
144	5720	26.385	14.21

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	55.847	17.47	24.00	Pass
46	5230	61.518	17.89	24.00	Pass
54	5270	69.343	18.41	24.00	Pass
62	5310	35.318	15.48	24.00	Pass
102	5510	31.550	14.99	24.00	Pass
110	5550	68.707	18.37	24.00	Pass
134	5670	67.143	18.27	24.00	Pass
142	5710 For U-NII-2C	47.154	16.74	24.00	Pass
142	5710 For U-NII-3	3.737	5.73	30.00	Pass
151	5755	66.374	18.22	30.00	Pass
159	5795	69.024	18.39	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(47.88) = 27.80 dBm > 24dBm
2. 11dBm + 10log(45.46) = 27.58 dBm > 24dBm
3. 11dBm + 10log(45.39) = 27.57 dBm > 24dBm
4. 11dBm + 10log(71.54) = 29.55 dBm > 24dBm
5. 11dBm + 10log(55.96) = 28.48 dBm > 24dBm
6. 11dBm + 10log(5725.00 - 5671.73) = 28.26 dBm > 24dBm.

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
142	5710	50.891	17.07

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	48.753	16.88	24.00	Pass
58	5290	49.888	16.98	24.00	Pass
106	5530	47.643	16.78	24.00	Pass
122	5610	69.024	18.39	24.00	Pass
138	5690 For U-NII-2C	52.714	17.22	24.00	Pass
138	5690 For U-NII-3	1.355	1.32	30.00	Pass
155	5775	**70.307**	18.47	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(85.17) = 30.30 dBm > 24dBm
2. 11dBm + 10log(85.53) = 30.32 dBm > 24dBm
3. 11dBm + 10log(123.42) = 31.91 dBm > 24dBm
4. 11dBm + 10log(5725.00 - 5629.26) = 30.81 dBm > 24dBm.

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
138	5690	54.069	17.33

26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	24.19
40	5200	27.75
48	5240	27.57
52	5260	25.00
60	5300	32.37
64	5320	27.51
100	5500	30.29
116	5580	39.42
140	5700	24.58
144	5720 For U-NII-2C	24.73

802.11n (HT20)

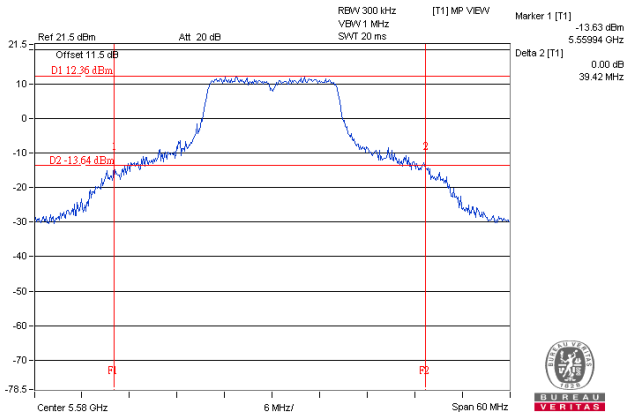
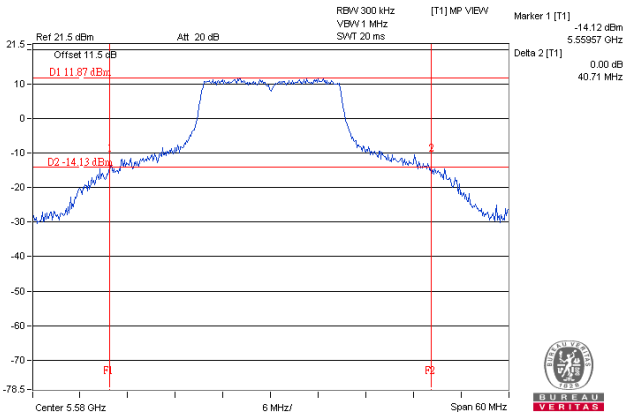
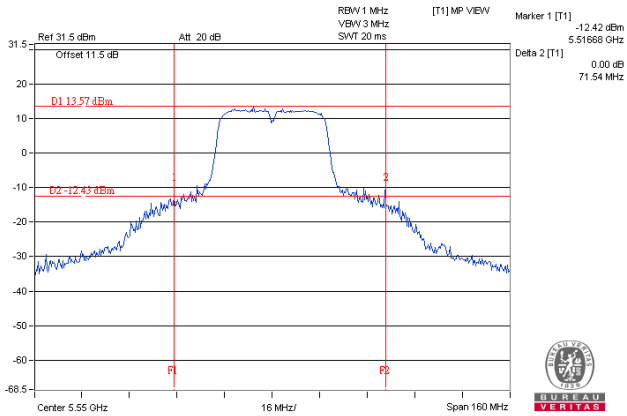
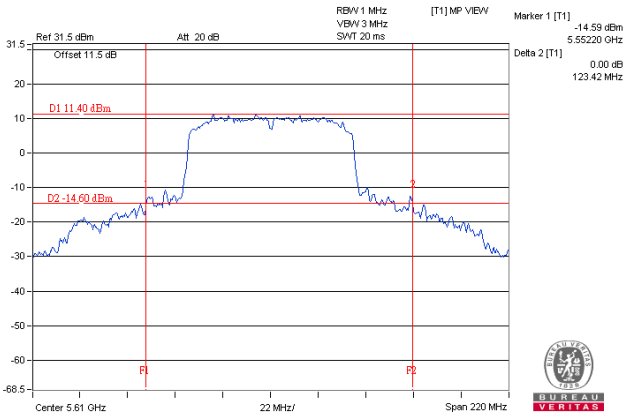
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	24.54
40	5200	29.48
48	5240	33.76
52	5260	27.93
60	5300	29.25
64	5320	23.60
100	5500	27.24
116	5580	40.71
140	5700	24.90
144	5720 For U-NII-2C	25.71

802.11n (HT40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	45.89
46	5230	48.22
54	5270	47.88
62	5310	45.46
102	5510	45.39
110	5550	71.54
134	5670	55.96
142	5710 For U-NII-2C	53.27

802.11ac (VHT80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
42	5210	84.91
58	5290	85.17
106	5530	85.53
122	5610	123.42
138	5690 For U-NII-2C	95.74

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	69.984	18.45
5470~5725	67.764	18.31

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	68.707	18.37
5470~5725	69.663	18.43

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	69.343	18.41
5470~5725	68.707	18.37

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

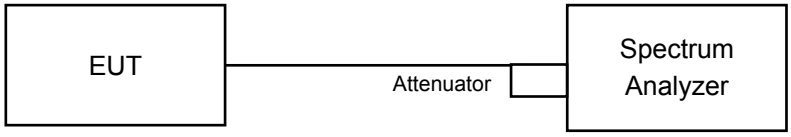
802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	49.888	16.98
5470~5725	69.024	18.39

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.4.4 Test Result

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.04
40	5200	17.28
48	5240	17.28
52	5260	17.28
60	5300	17.40
64	5320	17.28
100	5500	17.52
116	5580	18.96
140	5700	17.28
144	5720 For U-NII-2C	14.72
144	5720 For U-NII-3	4.84
149	5745	21.24
157	5785	21.24
165	5825	20.88

802.11n (HT20)

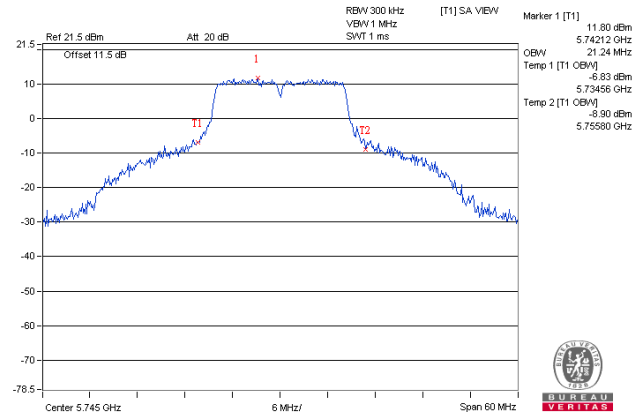
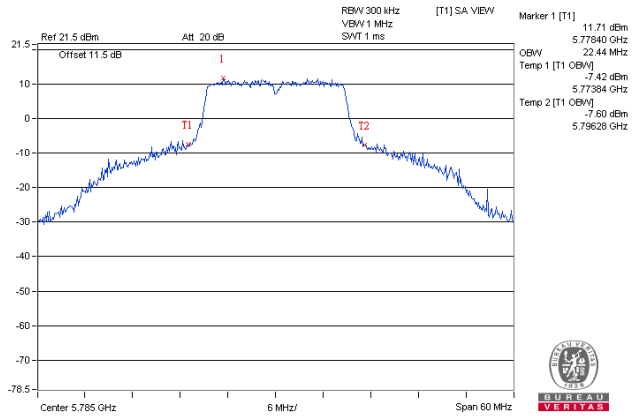
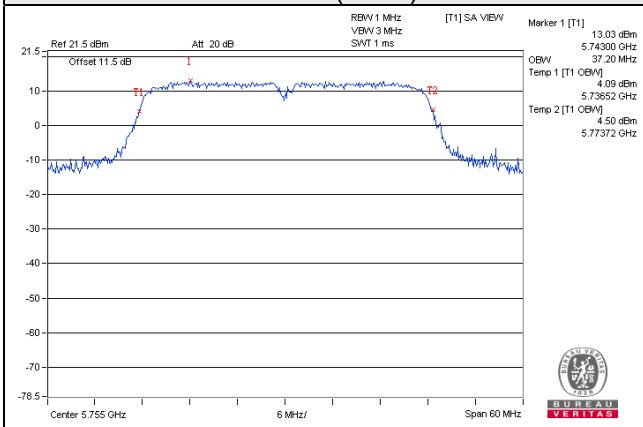
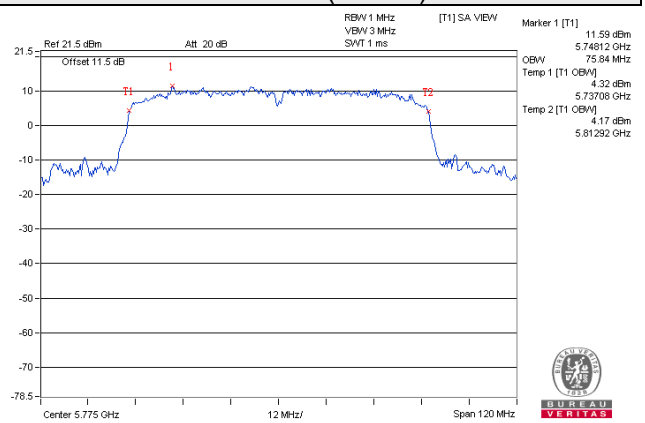
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.24
48	5240	18.36
52	5260	18.36
60	5300	18.36
64	5320	18.24
100	5500	18.24
116	5580	18.96
140	5700	18.24
144	5720 For U-NII-2C	15.08
144	5720 For U-NII-3	5.44
149	5745	22.32
157	5785	22.44
165	5825	21.84

802.11n (HT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.60
46	5230	36.72
54	5270	36.72
62	5310	36.60
102	5510	36.72
110	5550	36.96
134	5670	36.84
142	5710 For U-NII-2C	33.48
142	5710 For U-NII-3	3.60
151	5755	37.20
159	5795	37.08

802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	74.88
58	5290	74.88
106	5530	74.88
122	5610	75.36
138	5690 For U-NII-2C	72.68
138	5690 For U-NII-3	2.68
155	5775	75.84

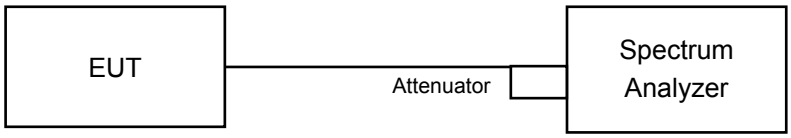
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C band:
Duty cycle of test signal is ≥ 98%
Using method SA-1
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value

Duty cycle of test signal is < 98 %
Using method SA-2
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:
Duty cycle of test signal is ≥ 98%
Using method SA-1
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS.
3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured 1) power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz).
5) Sweep time = auto, trigger set to “free run”.
6) Trace average at least 100 traces in power averaging mode.
7) Record the max value.

Duty cycle of test signal is < 98 %
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
5) Sweep time = auto, trigger set to “free run”.
6) Trace average at least 100 traces in power averaging mode.
7) Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

For U-NII-1, U-NII-2A, U-NII-2C band

802.11a

Chan.	Freq. (MHz)	PSD without Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.89	0.67	5.56	11	Pass
40	5200	6.30	0.67	6.97	11	Pass
48	5240	6.04	0.67	6.71	11	Pass
52	5260	6.02	0.67	6.69	11	Pass
60	5300	5.99	0.67	6.66	11	Pass
64	5320	4.49	0.67	5.16	11	Pass
100	5500	5.58	0.67	6.25	11	Pass
116	5580	6.60	0.67	7.27	11	Pass
140	5700	4.16	0.67	4.83	11	Pass
144	5720 For U-NII-2C	7.39	0.67	8.06	11	Pass

802.11n (HT20)

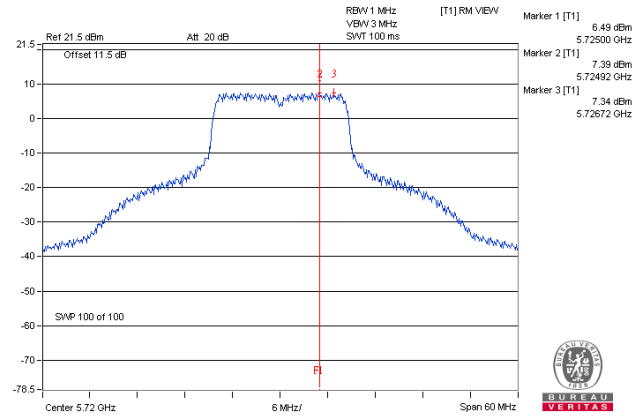
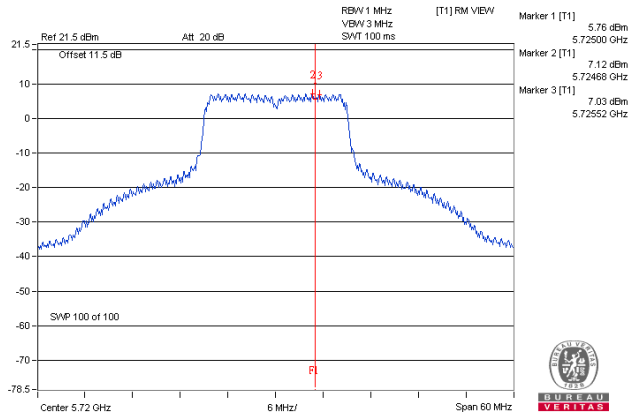
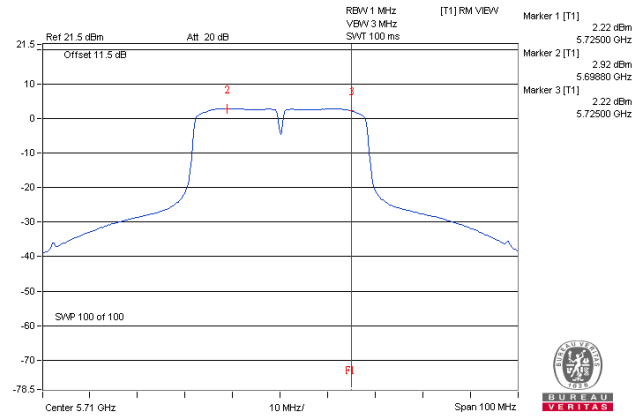
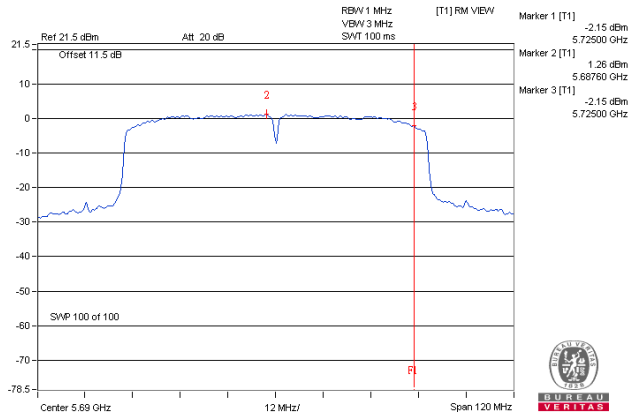
Chan.	Freq. (MHz)	PSD without Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.44	0.67	5.11	11	Pass
40	5200	6.04	0.67	6.71	11	Pass
48	5240	6.17	0.67	6.84	11	Pass
52	5260	5.74	0.67	6.41	11	Pass
60	5300	5.81	0.67	6.48	11	Pass
64	5320	4.20	0.67	4.87	11	Pass
100	5500	4.44	0.67	5.11	11	Pass
116	5580	6.39	0.67	7.06	11	Pass
140	5700	3.34	0.67	4.01	11	Pass
144	5720 For U-NII-2C	7.12	0.67	7.79	11	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	PSD without Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-1.67	1.26	-0.41	11	Pass
46	5230	0.63	1.26	1.89	11	Pass
54	5270	0.88	1.26	2.14	11	Pass
62	5310	-4.46	1.26	-3.20	11	Pass
102	5510	-2.88	1.26	-1.62	11	Pass
110	5550	1.08	1.26	2.34	11	Pass
134	5670	-0.16	1.26	1.10	11	Pass
142	5710 For U-NII-2C	2.92	1.26	4.18	11	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD without Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-6.46	2.55	-3.91	11	Pass
58	5290	-6.52	2.55	-3.97	11	Pass
106	5530	-5.72	2.55	-3.17	11	Pass
122	5610	-2.21	2.55	0.34	11	Pass
138	5690 For U-NII-2C	1.26	2.55	3.81	11	Pass

Spectrum Plot of Worst Value	
802.11a / CH 144	802.11n (HT20) / CH 144
	
802.11n (HT40) / CH 142	802.11ac (VHT80) / CH 138
	

For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD		Duty factor	Total PSD (dBm /500kHz)	Limit (dBm /500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 For U-NII-3	-1.03	1.19	0.67	1.86	30.00	Pass
149	5745	-1.32	0.90	0.67	1.57	30.00	Pass
157	5785	-1.70	0.52	0.67	1.19	30.00	Pass
165	5825	-1.48	0.74	0.67	1.41	30.00	Pass

802.11n (HT20)

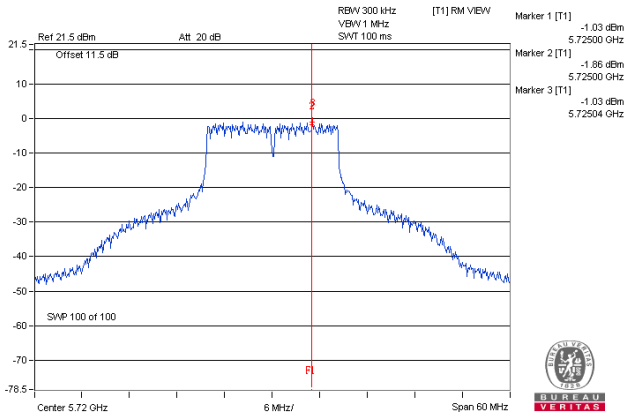
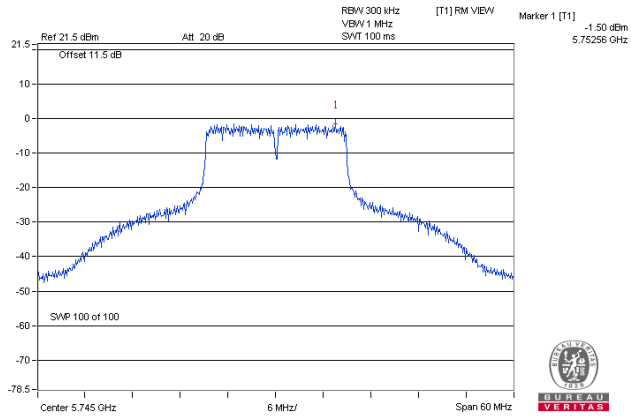
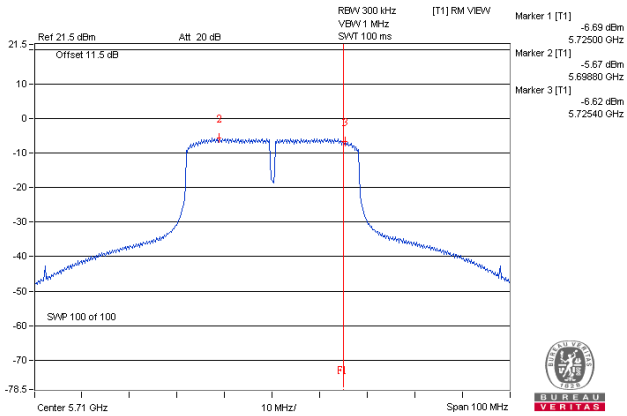
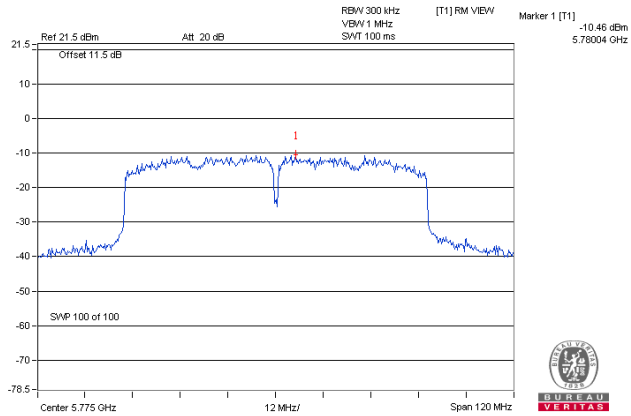
Chan.	Freq. (MHz)	PSD		Duty factor	Total PSD (dBm /500kHz)	Limit (dBm /500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 For U-NII-3	-1.76	0.46	0.67	1.13	30.00	Pass
149	5745	-1.50	0.72	0.67	1.39	30.00	Pass
157	5785	-1.81	0.41	0.67	1.08	30.00	Pass
165	5825	-1.99	0.23	0.67	0.90	30.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	PSD		Duty factor	Total PSD (dBm /500kHz)	Limit (dBm /500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
142	5710 For U-NII-3	-6.62	-4.40	1.26	-3.14	30.00	Pass
151	5755	-7.17	-4.95	1.26	-3.69	30.00	Pass
159	5795	-7.28	-5.06	1.26	-3.80	30.00	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD		Duty factor	Total PSD (dBm /500kHz)	Limit (dBm /500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
138	5690 For U-NII-3	-10.58	-8.36	2.55	-5.81	30.00	Pass
151	5755	-10.46	-8.24	2.55	-5.69	30.00	Pass

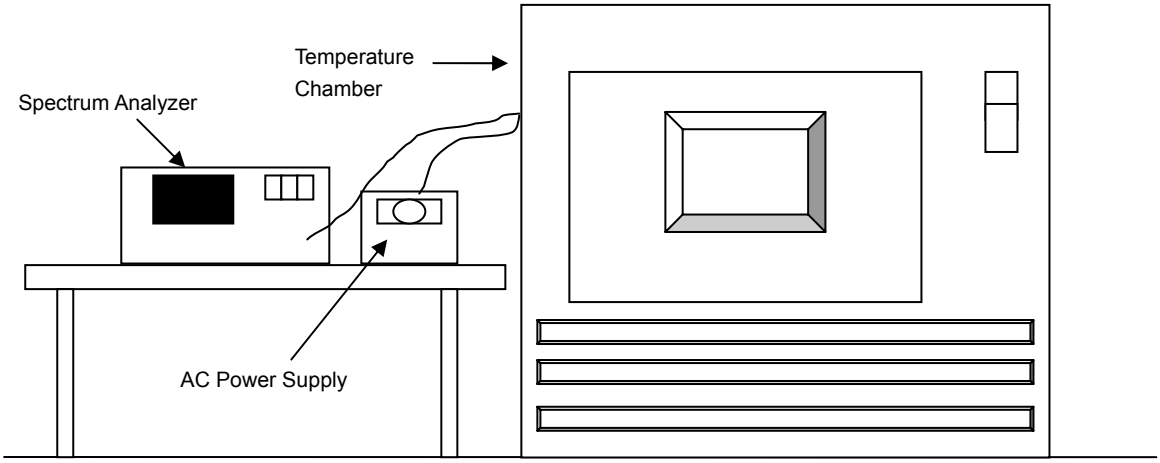
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5180.0012	0.00002	5180.0023	0.00004	5180.0027	0.00005	5180.0041	0.00008
40	120	5179.9880	-0.00023	5179.9897	-0.00020	5179.9880	-0.00023	5179.9877	-0.00024
30	120	5179.9805	-0.00038	5179.9772	-0.00044	5179.9773	-0.00044	5179.9809	-0.00037
20	120	5180.0182	0.00035	5180.0177	0.00034	5180.0182	0.00035	5180.0167	0.00032
10	120	5180.0169	0.00033	5180.0184	0.00036	5180.0154	0.00030	5180.0184	0.00036
0	120	5179.9976	-0.00005	5179.9968	-0.00006	5179.9943	-0.00011	5179.9954	-0.00009
-10	120	5180.0067	0.00013	5180.0084	0.00016	5180.0064	0.00012	5180.0097	0.00019
-20	120	5180.0196	0.00038	5180.0176	0.00034	5180.0210	0.00041	5180.0210	0.00041
-30	120	5180.0075	0.00014	5180.0073	0.00014	5180.0091	0.00018	5180.0087	0.00017

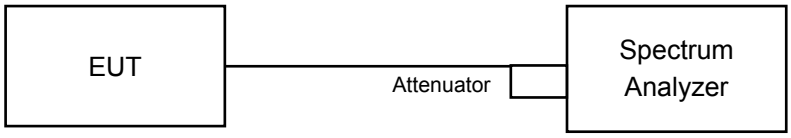
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5180.0174	0.00034	5180.0185	0.00036	5180.0177	0.00034	5180.0177	0.00034
	120	5180.0182	0.00035	5180.0177	0.00034	5180.0182	0.00035	5180.0167	0.00032
	102	5180.0172	0.00033	5180.0172	0.00033	5180.0176	0.00034	5180.0163	0.00031

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

Measurement Procedure REF

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.24	0.5	Pass
149	5745	16.40	0.5	Pass
157	5785	16.42	0.5	Pass
165	5825	16.40	0.5	Pass

802.11n (HT20)

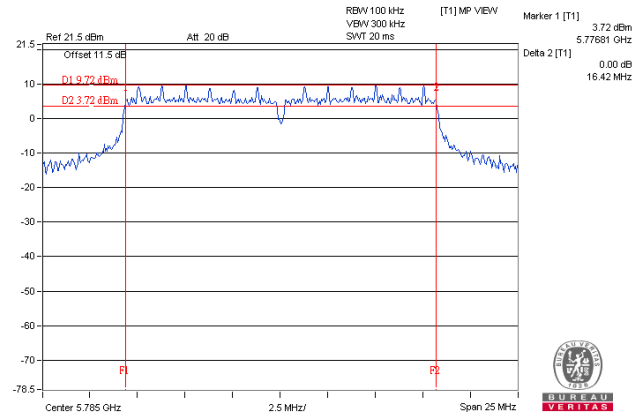
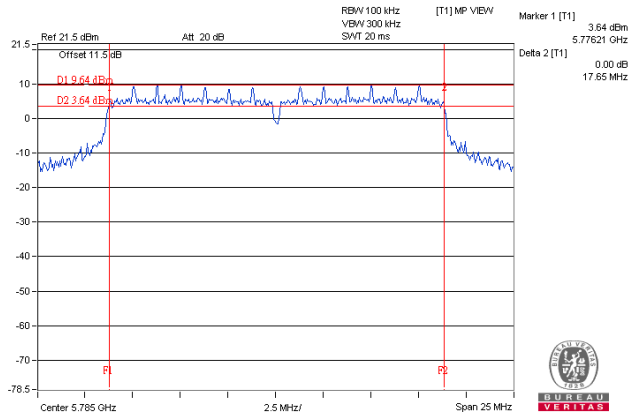
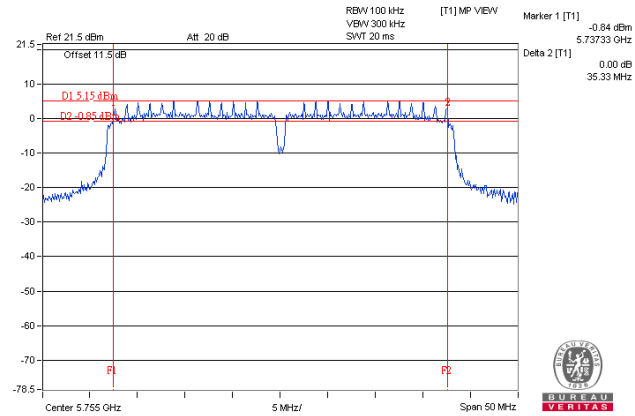
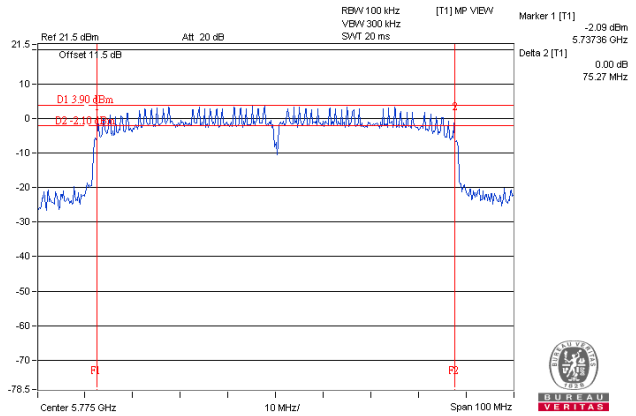
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.85	0.5	Pass
149	5745	17.63	0.5	Pass
157	5785	17.65	0.5	Pass
165	5825	17.64	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 For U-NII-3	2.67	0.5	Pass
151	5755	35.33	0.5	Pass
159	5795	35.32	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 For U-NII-3	2.63	0.5	Pass
155	5775	75.27	0.5	Pass

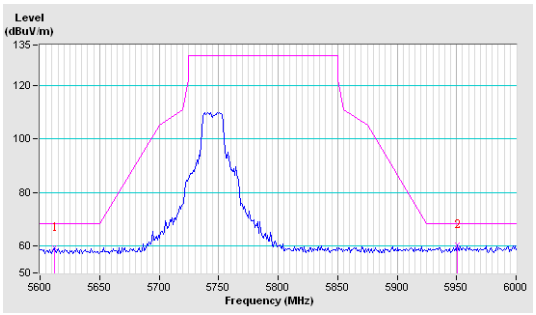
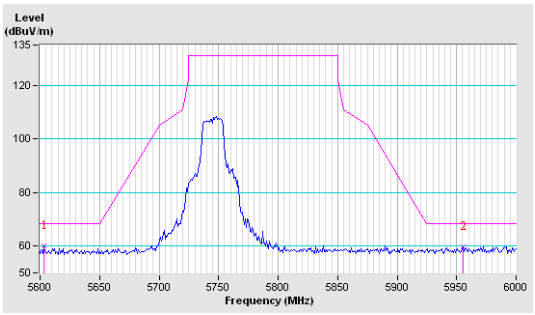
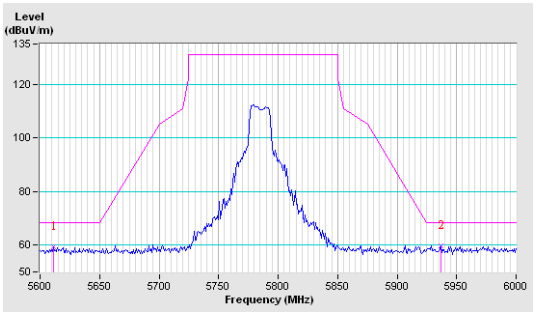
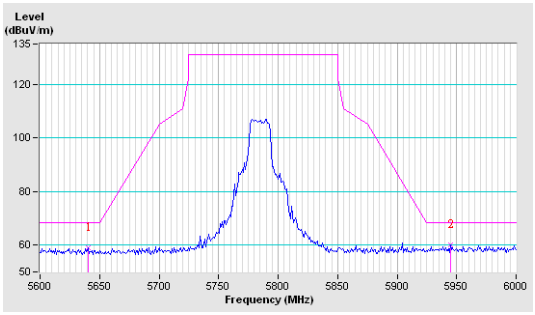
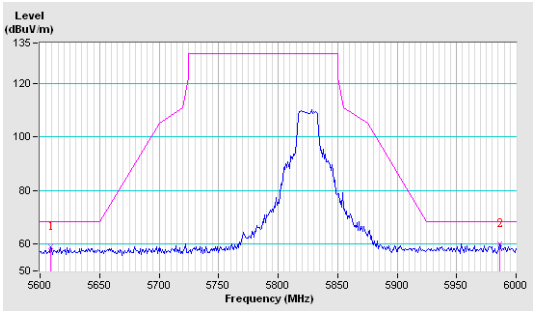
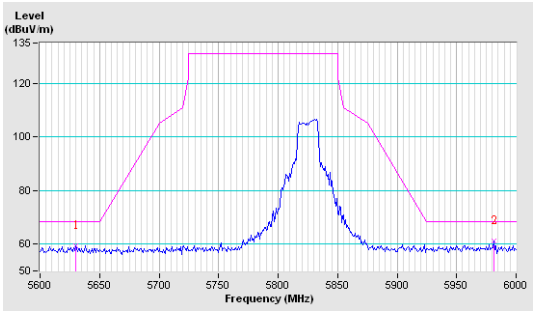
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

5 Pictures of Test Arrangements

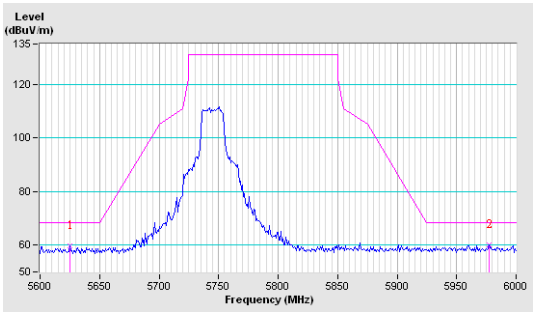
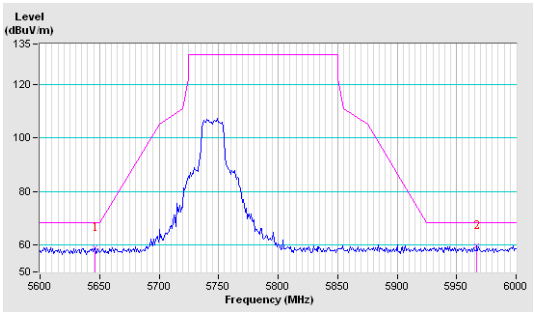
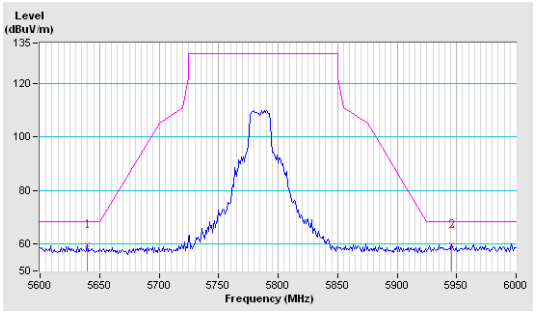
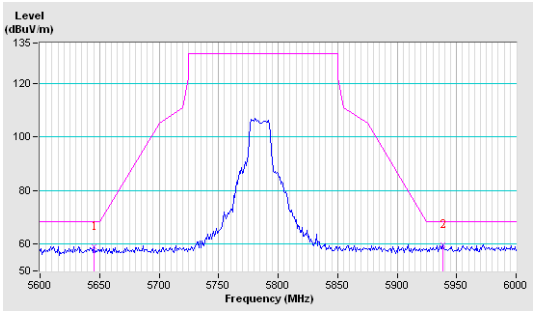
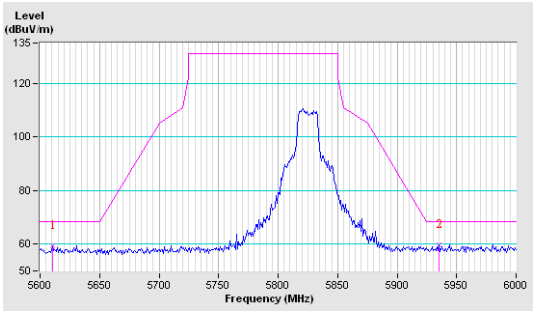
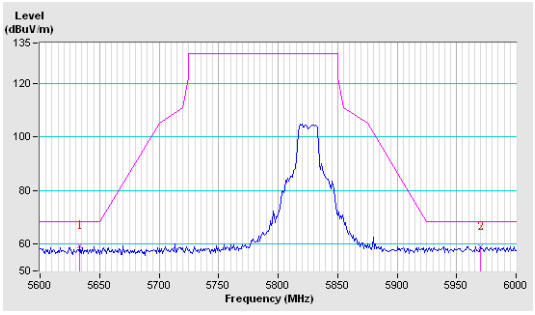
Please refer to the attached file (Test Setup Photo).

Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

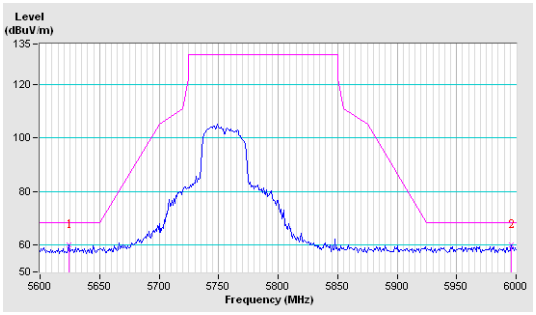
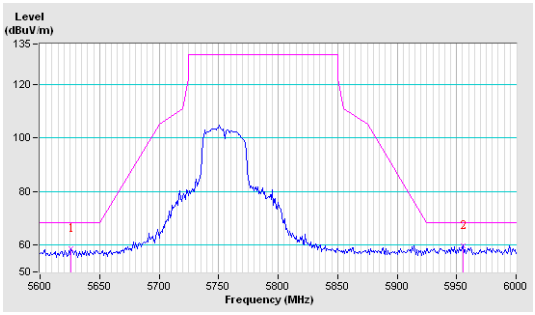
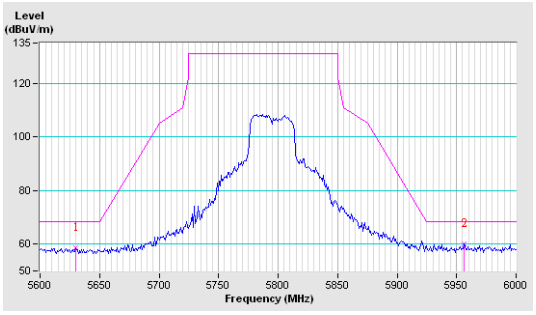
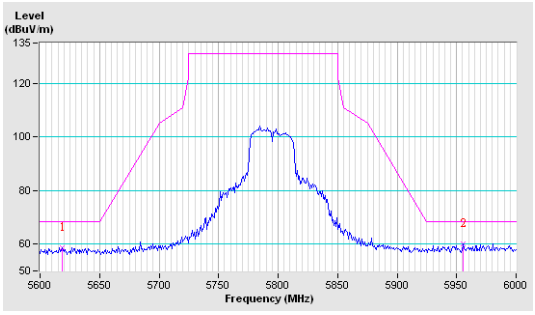
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

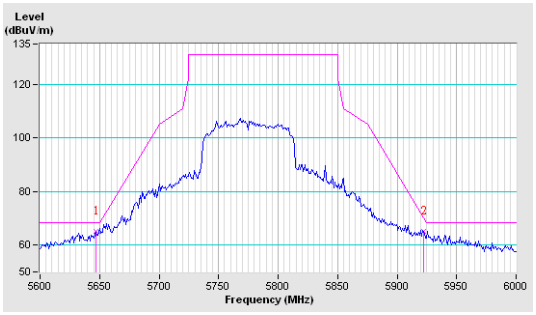
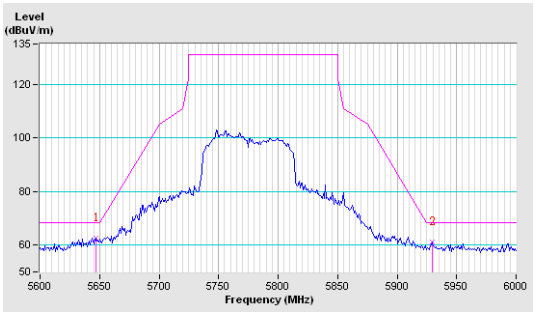
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

CH155	
Horizontal	Vertical
	

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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